
CASE STUDY

Small company, big vision

Robotics help to keep Dutch bakery
profitable and flexible



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Since the 1960s Interbanket has baked, packaged and delivered cookies of all types. They don't have their own label, but you have likely seen some of their distinctive Dutch products under various labels on store shelves across Europe and the world.

As a small, family-owned company located close to Amsterdam, Interbanket has many strengths, including the ability to react quickly to the market, stay close to their customers and remain flexible in the face of modern production challenges.

"Before the early nineties we were only exporting to Germany, but after that point we started exporting to more and more countries," says Wilco Roelse, who is only the third owner of Interbanket in more than 50 years, after succeeding his father in the nineties. "For companies like us, it is not possible to exist only on sales to the Dutch market anymore — there's too much competition — but in other countries our Dutch cookies are a unique and exotic product which makes it easier to differentiate them."

These days Interbanket exports about 85 to 90 percent of their products, which are made on two

production lines. One of these lines is built to handle cookies and biscuits of all kinds, and the other produces stroopwafels — the famous and typical Dutch syrup wafers.

"For most of our history we packed cookies by hand," says Roelse. "Labor and associated personnel costs are our biggest cost. Every year profit was going down due to thinning margins, so we had to find a way to increase profits to stay viable. There are some ways you can try to do this, including finding cheaper raw materials or increasing your selling price, but both of those are always difficult — it's not nice to your customer to say I have to increase the price and keeping a very high quality is always the first order of business. So you try to find other solutions to keep the costs down and then you come to automation as an obvious conclusion — robotics in particular."



When Roesle first started to think about robotics, he attended several trade shows, getting new ideas and making connections. His biggest concern was the risk in losing production during the shift from manual packaging to robotic packaging, so they spent a lot of time identifying all the risks associated with each product group and eventually asked machine builder Tehama B.V. to help them implement the robots.

“It turned out to be very difficult to find the right solutions to pack our products automatically, and for that we needed a good supplier,” says Roelse. “Tehama is also a small family company — I’ve known their people for many years and it’s nice to do business with another family company because you understand each other.”

Tehama is based locally in the Netherlands, and only recently began to use robotics in their automation solutions. The combination of the small business mindset, coupled with decades of experience in traditional bakery automation has made moving into robotic automation a seamless process for them.

“We make complete sorting and packaging lines,” says Ron Haaring, Sales Director for Tehama. “We’ve developed so many machines through the years that we can make a solution for the customer that takes the products from the cooling belt all the way to the pallet.”

At Interbanket’s facility, the major challenge was the large amount of cookies they needed to package. On the one line that was slated for robotic automation they make nineteen different kinds of products, packed thirty different ways into a tray, including flat, at an angle of forty-five degrees and at an angle of ninety degrees. When you add up all the different kinds of toppings and labeling, as Roelse says, there are never-ending possibilities.

I first looked at it in the traditional way of making machines, but there were so many different packaging styles and cookie combinations it couldn’t be done. We needed incredible flexibility to transform the line quickly between batches of cookies, and the only way it could be built was with robots.”

Ron Haaring, Tehama

Given that this was Tehama’s first foray into the world of robotic automation, they turned to ABB Robotics BeNeLux for some advice. In the end the project team decided to go with seven IRB 140 six axis robots for the line instead of six four axis delta robots.

“I got a call from Tehama saying they had a new project and needed to use robots,” says Haayo Terpstra, Business Development Manager, ABB Robotics BeNeLux. “The first idea was to put in the IRB 360 delta robots, but during our discussions we realized that picking up the product flat from the conveyor and tilting it to put it into a package could only be done by six axis robots. In addition, we were able to keep costs down due to the reduced mounting needs of the IRB 140.”

ABB is a very big company with many, many yeSars of experience and they gave me the right support to develop the right programming for this solution. It didn't matter that we were a small company working with another small company, ABB Robotics BeNeLux treated us like family."

Ron Haaring, Tehama

Over several tests with the IRB 140 in the Interbanket facility, Terpstra and his team were able to convince Tehama that it was the right robot for the job. ABB also helped Tehama with some RobotStudio offline virtual computer trials to figure out the best positions for the robots, as well as gripper attachment configurations. Before starting, Roelse says he knew of ABB, but put his trust in Haaring and Tehama to choose the right robot supplier.

"This robotic system is very flexible and was quite complicated to design," says Roelse. "But one of the main goals was to keep the system easy to operate so that the same people who packed the products by hand a few years ago can now run the line and reconfigure it themselves between product runs. In fact, the changeovers are very quick, taking between five and ten minutes to complete between two very different products. The production pressure on the people is less now, because the robots are doing the hard labor and the people keep an eye on the robots."

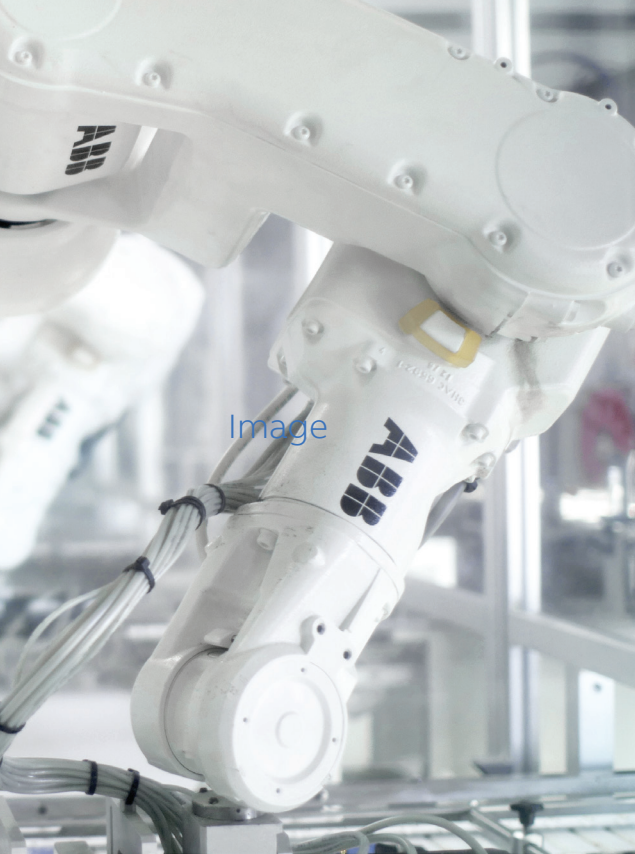
With the robots now running at full speed for several months it's clear that the line has delivered a bit better output, but the biggest benefit was the lowering of labor costs. "In the past it was six or seven people that did the job, and now there is one operator who looks at the line and keeps the line filled with empty trays and other jobs, but the robots do the work," says Haaring. "It allows Interbanket to continue operating in the era of small margins and still turn a profit."

In fact, in the early eighties Interbanket had a production output of 1500 kilos of dough each day, and now they go through more than 3500 kilos of dough each day, using fewer people and in the same time.

"I always think about flexibility," says Roelse. "Try to be flexible everywhere in your company: to the people, to your products, how to pack your products, to the customers, and try to solve their problems — and that's a strong point for small companies I think."

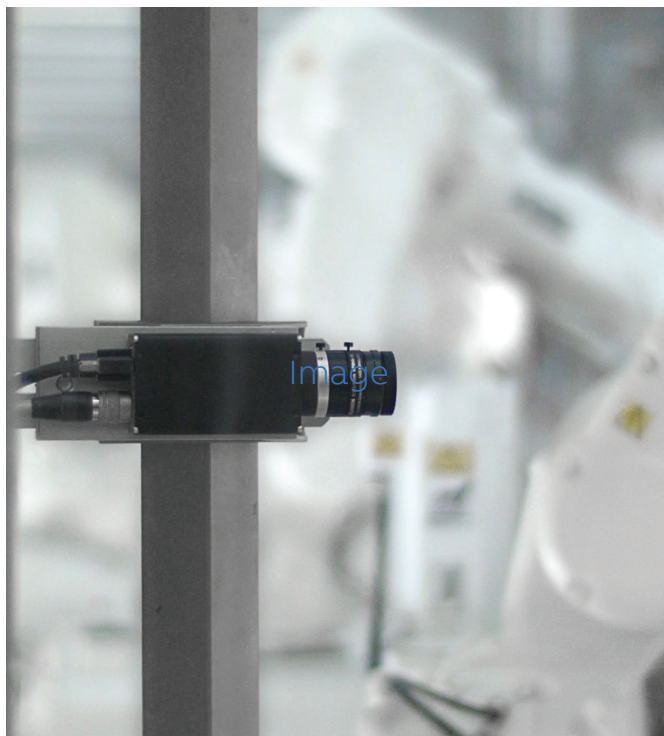
"Since this experience with ABB, I'm able to develop more machines with products that I couldn't make machines for in the past, so Tehama's business is growing bigger," says Haaring. "We're absolutely going to use more robots in the future. It opens the market for me to do more difficult products that conventional lines couldn't do in the past."





Image

01



Image

02



03





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