



The perfect pastry package

Before reaching the tables of dessert-lovers, Forno Bonomi's éclairs are packed by robots who handle the delicate pastries with the care of a connoisseur.

By Claudia Magli
Photos courtesy Bonomi

> At Italian baked-goods firm Forno Bonomi, ladyfingers and éclairs aren't the only thing you will find in the factory. You will also find the latest in automation technology, thanks to the owners of the company, the Bonomi brothers.

The brothers not only make a practice of trying their own products, they also like to test the newest innovations in automation. They credit automation with enabling the Veronese Bonomi brand to combine a long tradition in the confectionery industry with the requirements of an increasingly extensive and demanding market.

Bonomi started investing in electronics and automation at a time when just talking about them seemed like science fiction: "We had to make a virtue of necessity," Renato Bonomi says. "Not only due to a lack of manpower, given our geographic location, but also to deal with an ever more-demanding international clientele who expected high quality and at the same time standard products that were always the same." Foreign markets, from Europe and the United States to Asia and Australia, still make up a big slice of Forno Bonomi's business, especially when it comes to ladyfingers and éclairs.

"We always wanted to be automated and to make our machines internally," says Renato Bonomi. "Today we are self-sufficient in terms of maintenance,

thanks to our workshop, while in terms of electronics we call on Tech-Pa, a company to which we are historically linked." Since 1992 Tech-Pa has been Bonomi's sole supplier for the automation and electronics of the special machines.

"We opted specifically for independence and autonomy for the electronic aspects of our machines and with Tech-Pa we are certain of having machines which meet our most specific requirements," Renato Bonomi says.

Forming part of this background is the collaboration between Forno Bonomi and ABB Robotics. Since 2005, there have been two projects based on the use of ABB robots on the éclair production line and the packaging line of the different cakes produced at the Roveré establishment.

"We chose ABB," says Renato Bonomi, "because it was our clear intention to put our trust in the experience of companies that have dealt in automation and robotics for many years, but at the same time we wanted to be capable of doing something new and to bring innovative elements to our lines."

You can imagine the smell of delicious hot, crumbly éclairs, Bonomi's flagship product, so delicate in their lightness and goodness and at the same time so fragile that they can easily be scratched or shattered,

altering the surface, edges and appearance. The appearance is an integral part of the quality of a product like Bonomi éclairs, so it's important that the packaging solution does no damage to the pastry.

Forno Bonomi chose four ABB IRB 340 robots, along with vision systems for first-level dimensional control, which pick up the éclairs from the belt after baking in the ovens and place them on plastic trays, in three layers of seven. This is done with extreme

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Renato Bonomi, Forno Bonomi

delicacy, thanks to the gentle grip of the suction cups researched individually with the client. Any éclairs that don't pass inspection are not packaged, with the operator having to make a second visual inspection of the baking.

The robots' four-axis movement ensures the flexibility required by Forno Bonomi: “Among the vari-

ous possibilities taken into consideration, including the multiple pick option, the ABB solution proved to be the best and the one which gave us the most flexibility,” says Renato Bonomi.

After passing through the flowpack and being packaged, the trays have to be sealed in the proper boxes to be dispatched to their different destinations. To speed up this operation as well, one of the packaging machines uses three ABB IRB 260 robots. The optimization of spaces and the intelligent movement of the robots in the narrow environments are very important in this phase of the assembly line. Here too, the presence of the ABB 4-axis robots is the best guarantee of the flexibility Forno Bonomi needs.

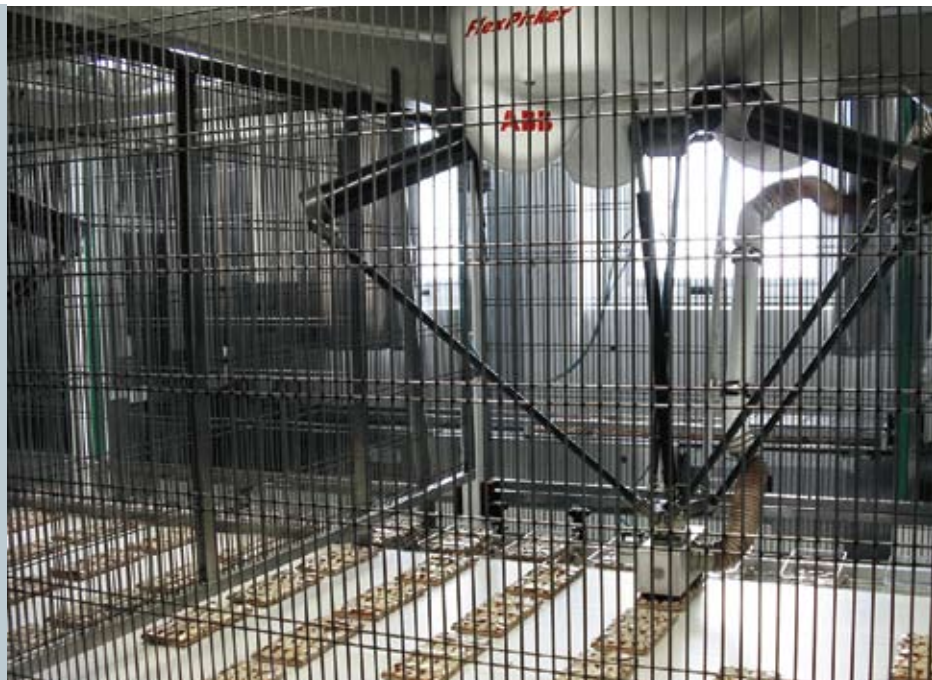
“Over the years we have endeavoured to adapt the traditional recipes to the industrial installations, preserving quality and tradition, so that the machines would not be an obstacle to family tradition,” says Renato Bonomi. “Our motto was to match the machine to the dough and not the dough to the machine, in order to transfer the confectioner's secrets to the automated production plant. For example, how you dose and pour the sugar, how you knead and roll out the puff pastry, in many cycles, layer after layer.” In other words: If the recipe is right, even the automation tastes good. ☺

>FACTS

Handled with care

The four IRB 340 robots that Forno Bonomi uses for the handling of their éclairs - picking the éclairs as well as inspecting them for defects - provide a number of benefits:

- Extra-high hygiene needs of pastry production are met with the stainless steel robot
- Maximum versatility due to the robot being mounted high up, so that it does not occupy any additional space and is easily integrated into the whole production
- Vision system provides for expert inspection and saves time and prevents damaged or sub-standard pastries from being packaged



Forno Bonomi

Established in 1850 as a craft bakery. After the Second World War, the parents of the current owners, the Bonomi brothers, expanded the family business by introducing confectionery production first with short pastry, and later with éclairs, which were created almost by chance to meet the request of a client from Verona.

- In 1975, headquarters established in Roveré Veronese
- Facilities are 14,000 square meters
- Has 105 employees
- www.fornobonomi.com