

## How Richelieu Foods developed their pizza crust production line in the midst of a pandemic



What if your strategic investment project rollout coincided with a global crisis like the Covid-19 pandemic? That's exactly what happened to Richelieu Foods when they were about to set up their pizza crust production plant in the spring of 2020. Following an intensive preparation period, all was set for work to start when the pandemic came along. They took the decision to go ahead as planned and managed to install all the equipment by themselves, with remote help from the manufacturers.

Headquartered in Braintree, Massachusetts, Richelieu Foods specializes in private label food products such as frozen pizzas, salad dressings, sauces, marinades, condiments, and deli salads. Richelieu's products are sold through prominent supermarket chains throughout the US and Canada.

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### Further grow the business

Richelieu Foods is a daughter of the Freiburger Group in Germany, an innovative company headquartered in Berlin and operating five pizza factories across Europe. Recently, Freiburger decided to invest in a crust production line at the factory in Wheeling, Illinois, thereby transferring the knowledge and technology built up in the European factories to the US. The project aimed to reduce dependence from the standard pizza bases sold in the US market, and to allow Richelieu Foods to create innovative products with a view on increasing the business.



### **New area of inhouse expertise**

The project meant that the company would have to develop an entirely new area of in-house expertise. "Making pizza crusts was an art we weren't familiar with," elaborates Jeff Klingel, Senior VP Manufacturing at Richelieu Foods. "Our R&D and engineering teams took the time to understand the formulations and learn all about the dosing and mixing and how dough behaves."

"We carried out lots of testing at the labs of equipment manufacturers to figure out the best ways to prepare high-quality pizza dough." (see also 'Accurate dosing with integrated dust and temperature control').



*Extensive laboratory testing at the manufacturers helped Richelieu bakers develop the best ways to prepare high-quality pizza dough.*

### **Strategic importance confirmed**

Orders were placed, the necessary equipment was manufactured, and everything was ready for the new crust production line to be installed. But this was in the spring of 2020 and we all know what happened next.

"When the pandemic struck, we knew that suppliers wouldn't be able to come to our premises for several months" Klingel remembers. "So, we could either store the equipment and put the project on hold, or we could regroup and install the equipment ourselves. We went for the second option, because Covid-19 had severely disrupted supply chains, underlining the strategic importance of the project."

### **Cooperative spirit and can-do mentality**

The decision made for tough challenges for everyone, including the suppliers. Klingel: "We worked closely with the equipment manufacturers, with video links and livestreams assisting us at every stage. It demanded a lot from everybody, but it was pretty amazing to see how smoothly things went. I particularly remember the cooperative spirit and can-do mentality of the people at Spiromatic, who in the end were just like part of our team, making this a big success. Even the interfaces we put in place between the different systems went according to plan."

## Accurate dosing with integrated dust and temperature control

Every part of the pizza crust production line is critical, and that is certainly true for the ingredient handling and dosing system. Jeff Klingel confirms: "When we were building up our in-house expertise, we quickly learned that the quality of the pizza dough in the end depends most on how the ingredients are handled at the front end and how they are dosed and delivered to the mixer. It has to be very accurate so that the dough is of consistently high quality."

// *Our experience through the testing process convinced us that their products, technical capabilities, cooperative spirit, and ingenuity was a winning combination.*

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"It's just as important at the handling stage that we control the temperature of the ingredients. This is to avoid a rise in temperature in the final dough, which would require an energy-intensive cooling operation. And from the point of view of operator convenience and easy maintenance, we also wanted the whole process to produce as little dust as possible."

### Details that make a big difference

After evaluating solutions from various suppliers, Richelieu chose Spiromatic's bulk ingredient handling and dosing system with its integrated dust removal feature. "Not only did they provide us with references from successful projects of similar scope, but our experience through the testing process also convinced us that their products, technical capabilities, cooperative spirit, and ingenuity was a winning combination."

"For moving flour around, they convinced us with a vacuum conveyor system where any energy transferred to the flour is controlled. This was the best solution to combat dust production and keep dough temperature down. Their solution includes an intelligent mechanism to let the system choose between extracting outside or inside air for conveying the flour, depending on the actual temperature and humidity."

"These are the details that make a big difference to how effective the equipment is."



*The solution intelligently switches between extracting outside or inside air for conveying the flour, depending on the actual temperature and humidity.*



# Specifications

Spiromatic's solution at Richelieu Foods includes the complete ingredient handling system. It has the following major components:

- Outdoor bulk Reinforced Polyester silo for controlled insulated flour storage.
- Pneumatic vacuum conveyor system, including sifter, to move the flour from silo to the weigh hopper mounted on a platform above the mixer.
- Weigh hopper for flour weighing and dosing.
- Oil storage and dosing system.
- Complete dust removal system.
- Minor ingredients system. Ingredients are pre-weighed at the dosing station before being discharged into a bag dump station from where they are pneumatically conveyed and discharged into the mixer.
- The entire system is controlled by an Allen-Bradley based control system designed and implemented by Spiromatic, integrated with the line's mixing control system.



**Jeff Klingel**

Senior VP Manufacturing at Richelieu Foods