Automation Meets Tradition
Progema Engineering automates cheese handling

RESULTS

- Automatic cheese handling with food-safe pneumatics.
- The machine adopts the forming and turning of Grana Padano and Parmigiano-Reggiano cheese wheels.
- All components used for the system meet the high standards of the food industry.

"The Clean Line concept from Emerson immediately convinced us."

Alberto Boceda
Head of mechanical engineering and co-owner of Progema Engineering S.R.L.

APPLICATION

A good "Parmesan" needs not only much time, but above all good care. Pressing out the whey and turning the resting heavy cheese wheels is back-breaking work. With the help of the Forma4 machine by Progema Engineering, producers can automate the process.
The machine adopts the forming and turning of Grana Padano and Parmigiano-Reggiano cheese wheels.

CUSTOMER

Progema Engineering S.R.L., Italia
The Italian company, located in Borgo Virgilio, in the province of Mantua, has 15 employees and is specialized in innovative dairy equipment. In its "Milk" division, it offers development, design, and manufacturing of special equipment used to automate cheese production. This includes, above all, automatic storage and cleaning systems according to the CIP principle (Cleaning in Place) for process engineering systems in the food industry.

CHALLENGE

During the 25 years since the company was founded, Progema Engineering has gained extensive expertise with dairy applications and knows exactly what really matters. "All components used for our systems have to meet the high standards of the food industry. In addition, we always guarantee that our machines are food-safe, despite customizing them to individual customer's needs. That's why we decided to use pneumatic components from Emerson when configuring our Forma4 machine for automation," says Daniele Barbieri, co-owner and head of electrical engineering.
In cheese production, all components have to comply with premium standards and endure countless cleaning sequences. Therefore, the right choice of components and their materials is just as important as the use of hygienic components that are easy to service, clean,

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disinfect, and maintain

SOLUTION

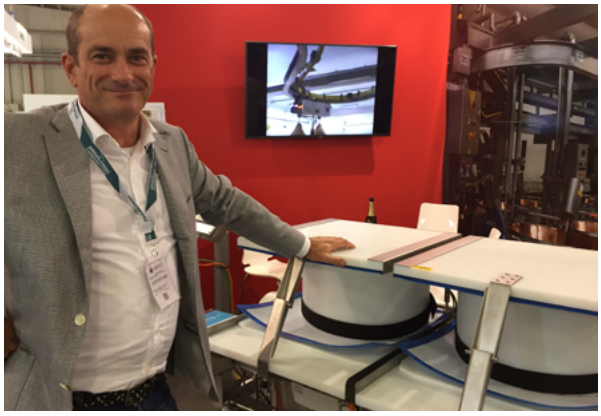
Corrosion-resistant, double-acting AVENTICS™ cylinders from the ISO Clean Line (CCL) series close the round molds and ensure that the whey is pressed out by applying the appropriate pressure. Later on, when the cheese wheels are turned, the cylinders keep the mold under tension. AVENTICS CL03-EV valves from Emerson regulate cylinder movements and are installed directly on the consumer. The CL03-EV valves are ideal for such applications due to their tailored design and the high protection class of IP69K. AS05 series maintenance units ensure the right compressed air preparation and complete the installed pneumatic system.

Thanks to their protection against high-pressure water and steam jet cleaning (IP69K) and a hygienic design, Progema Engineering can install the individual valves of the CL03-EV series in decentralized locations. By using them directly on the actuators, the compressed air lines are shorter, which minimizes dead volumes and pressure losses, and reduces air consumption.

RESOURCES

Emerson's solutions for food & beverage:
www.emerson.com/en-us/industries/automation/food-beverage

> "The regular turning of the approximately 40-kilogram cheese wheels takes on our automatic turning device."
>
> **Daniele Barbieri,**
> Head of mechanical engineering and co-owner of Progema Engineering S.R.L.



Alberto Boceda, head of mechanical engineering and co-owner of Progema Engineering S.R.L.

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