

# Fast filling

In the fast-moving world of speciality salads and convenience meals, the machines built by Robot Food Tech ensure that the results taste good. These machines fill, seal and pack culinary specialities into various containers. Festo automation in the form of servopneumatic components, sensors and process drives, sets the pace.



The RCF robotic filling machine is distinguished by its short set-up times.



**W**hat requires hours with other filling and packaging lines during format changes, takes us just a few minutes”, declares Harald Grüne, Managing Director of Robot Food Tech. Grüne is speaking of the set-up times to change the filling modules over to work with different sizes. It is due in no small measure to these short changeover times that this machine builder is regarded as among the world’s leaders in speciality food processing. With pride, the company promotes the slogan “Leadership in Packaging”, reflecting the fact that Robot Food Tech has for years sold and serviced traditional filling and packaging systems worldwide under the “Lieder” brand name.

## Serving with high positioning accuracy

The best example of the high speed delivered by Robot Food Tech from its factory in northern Germany is the RCF robotic filling machine. This achieves output rates of up to 800 fillings per minute. For the RCF filling machine, it is an easy task to fill products such as salads, jams, butter, or sauerkraut to precise weight specifications.

The containers are hermetically sealed after filling. This is the only way the quoted “Best before” date can be achieved. A gasification station feeds nitrogen through ducts to the filled containers. This reduces the residual oxygen to a safe 0.1% of the original volume. The

nitrogen supply is regulated by a DLP, a pneumatic linear drive for process automation applications, while pressure sensors control the correct pressure for the nitrogen. The welding of sealing film is the last step in the filling and packaging process.

## Servopneumatic portioning

Servopneumatics is responsible for the precision of the filling operation. A Festo controller CMAX is used here for the fine regulation of the position and force of the pneumatic drives. “Thanks to this technology, our systems are able to benefit from the state of the art in automation technology,” says the young entrepreneur. Servopneumatic drives are better



**Output rates** of up to 800 fillings a minute: the RCF robotic filling machine of the “Lieder” brand made by Robot Food Tech. This machine is distinguished by its short set-up times (left).

**A gasification station** delivers nitrogen to the filled containers, which reduces the residual oxygen to a safe 0.1% of the original volume (centre).

**The supply** of nitrogen is regulated by a pneumatic linear actuator DLP for process automation applications (below).



than electric drives for this application. Electric drives have great difficulty in meeting the criteria for the protection class IP65 required in the food industry.

#### Worldwide presence

In addition to Festo’s ability to supply servopneumatic components, there is another reason why Robot Food Tech has chosen to work with this supplier. “We export 80% of the machines we sell. We therefore need automation technology suppliers whose components and systems are available in every corner of the world in just the same way as our filling machines for convenience meals and speciality salads are,” says industry expert Grüne. ■

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Area of activity: Servo- and robot-controlled filling and sealing machines, food production lines, assembly lines, final packaging lines for convenience food products, cosmetics and dairy products