

# Drive & Control profile

## Rexroth servo drives transform rotary filler performance, flexibility



Spee-Dee's newly developed rotary filler leverages the power of Rexroth digital servo drive technology to deliver a state-of-the-art machine capable of filling 250 containers per minute.

Spee-Dee Packaging Machinery leverages the unique advantages of Rexroth digital electric drives and motors to give their latest rotary filler machine more versatility and dramatically cut product changeover times.

Product changeovers can be one of the most time-consuming, least productive operations in any food and packaging line – so creating the first servo driven rotary filler,

capable of reducing product changeover times and making them as easy as pushing a button, offers manufacturers a new tool to boost packaging productivity.

### Challenge

Build a high-speed rotary filler using latest generation of digital servo drives and motors to speed product changeover, simplify operator control, and boost throughput

### Rexroth Solution:

Rexroth digital servo drives and motors synchronize five critical areas of the machine

### Results:

- Servo drives eliminate time-consuming mechanical adjustments for product changeovers
- Rexroth digital servo drives and motors offer engineering flexibility and faster, more efficient machine configuration and operation
- Machine adjustments are easier and faster
- Integrated checkweigher automatically adjusts infeed and filler drives to maintain precise product fill weights, minimizing waste and overweight or underweight containers

Rotary fillers are used to fill products into rigid containers. Spee-Dee Packaging Machinery, Inc. ([www.spee-dee.com](http://www.spee-dee.com)) is recognized as one of the industry's leading manufacturers of these highly automated, high-throughput systems, which package dry products in consumer size bottles and cans.

In rotary fillers, containers are fed into the machine by an infeed screw onto a rotary turret; the container passes under the filler for a precise amount of time, so that the desired amount of product is dispensed.

Typically, timing of the container feed between the infeed screw and the infeed rotary turret is done manually, by making mechanical adjustments. Manufacturers have been frustrated by the downtime and lost productivity associated with mechanical functions.

#### **Customer requests servo design**

Recently, a customer requested Spee-Dee to develop a new, higher-speed rotary filler capable of filling 250 cans per minute and offering quick parts changeover and more flexibility. These requirements, along with Spee-Dee's goal of utilizing the latest, automation technology to improve productivity



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and performance, led the company to design a new servo-controlled rotary filler platform using Rexroth digital servo drives and motors.

Spee-Dee's rotary filler is one of the industry's first to feature servo drives for the main turret, timing screws and the fillers, creating a digitally controllable solution that eliminates time-consuming and imprecise mechanical adjustments for product changeovers.

Spee-Dee has used Rexroth drives and motors for over ten years in a wide range of machine applications, and has always had confidence in their performance and reliability, according to Spee-Dee's Vice-President of Sales and Marketing Timm Johnson.

"We have hundreds of machines using Rexroth drives and motors, and we've had a great deal of

success with them," he said. "Their performance, their flexibility, and technical sophistication provide a great platform for transforming many different food and packaging machines from mechanical control to digital automated operation."

#### **Improving filling productivity**

Rexroth intelligent servo drives let the operator time the system's container transition between feed screw and infeed star wheel on-the-fly, so set up and changeover adjustments can be made with the push of a button.

Using a digital servo system also helps improve operating costs and machine reliability. Eliminating bolts, screws and other moving parts significantly reduces maintenance requirements, manufacturing downtime and costs associated with maintaining additional change parts.

**Rexroth**  
Bosch Group