

# AMS Getränketechnik achieves US market success with specialised UL-Certified Swing Stopper Machines

Overseas expansion plans lead AMS to partnership with Rockwell Automation and integration of Allen-Bradley components the primary choice in North America

## Solutions

A Rockwell Automation solution was installed, which included:

- Competent consulting and advice from Rockwell Automation and its Austrian partner Routeco, concerning UL standards used in the US
- Assistance with machine redesign to include Rockwell automation control and automation components
- Allen-Bradley CompactLogix L455
- Allen-Bradley Kinetix 6000 multi-axis servo drives
- Allen-Bradley PanelView Plus
- Low-voltage devices
- Allen-Bradley PowerFlex 40
- Allen-Bradley MP Series low inertia servo motors
- Allen-Bradley MPAR linear actuators
- Safety systems.

## Results

- AMS' machines adhere to UL standards and respond to market demand for Rockwell Automation components, helping AMS to drive additional business in the US
- More reliable automation and drive components allowing throughput of 38,000 bottles per hour
- High levels of quality, with a 98-99 per cent rate of correct bottle closure
- Reduced machine conversion time due to uncomplicated integration of Allen-Bradley components with existing machine parts



## Background

Traditional beer bottles with a metal lever and ceramic stopper – known as swing stopper bottles – are more popular today than they have ever been. Many breweries around the world are now selling their products with this retro look – much to the delight of Helmut Gazso, founder and CEO of the AMS Getränketechnik, based in Enzenreith, Austria.

AMS Getränketechnik manufactures machines that automatically mount swing stoppers onto bottles and opens or closes them. However, in order to succeed in the US market AMS first needed to convert its machine to meet US standards.

Many of us like the ritual of opening a bottle – especially traditional beer bottles with a metal lever and ceramic stopper. Bottles with these closures are becoming very popular and are being adopted by many breweries around the world.

Most of the giants in the beverage industry purchase their machines from AMS Getränketechnik, with the company developing and delivering more than 80 machines.

But success has by no means gone to Gazso's head. "After all, we're selling a niche product," he says. "The European market is decreasing at the moment, so we are expanding our business overseas."

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## Challenge

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AMS recently took a big step in the right direction by developing a UL-certified machine for an American company – a customised machine that automatically seals bottles with a pre-fitted swing stopper. The challenge for AMS was converting the machine's basic structure to meet the UL standards prevalent in the USA.

With the downturn in Europe, AMS' strategy is to position itself even more strongly in the international market – so winning an order from a leading American vodka maker was a perfect boost to Gazso's expansion plans.

The company ordered a swing stopper machine that pushes the lever mechanism onto the bottle and

closes it automatically. But the order was dependent on two conditions. First, the control system and all the automation components had to be Allen-Bradley products from Rockwell Automation. And second, the control cabinet had to be UL-certified. These were areas where AMS lacked the necessary knowledge and experience.

## Solution

"We looked around the market to see who could help us, and we found Routeco, a Rockwell Automation distributor based in Austria," states Gazso. "It was important for us to get all the necessary components from a single supplier." Based on their many years of experience, both the Rockwell Automation and Routeco teams have vast knowledge and experience of UL standards.

Gazso continues: "They are always well-informed about upcoming standards that are currently being reviewed and likely to come into effect in the near future. Their knowledge helped AMS develop a machine that was absolutely up to date and well suited to the US market."

Based on AMS' CAD drawings, the team chose the most suitable Allen-Bradley components for the job at hand. These included CompactLogix Programmable Automation Controllers (PACs), Kinetix 6000 multi-axis servo drives, a PanelView Plus console, low-voltage devices, PowerFlex 40 AC drives, MP Series low-inertia servo motors, MPAR linear



actuators as well as safety systems. They then created the circuit diagram and rewrote the machine program so that it would work with the new CompactLogix L45S control system.

One of the machine's focal points is the drive solution, which comprises an Allen-Bradley PowerFlex 40 AC drive, two MPAR linear actuators and five Kinetix 6000 servo drives. Its five axes run synchronously and are controlled by a principal drive acting as the reference axis. "The project involved a lot of hard work," remembers Gazso, "but the collaboration with Rockwell Automation and Routeco worked really well."

In the customer's production line, the AMS machine is installed between the bottling plant and the labelling machine. The pre-filled bottles move onto the conveyor belt from one side and a screw conveyor then separates them to maintain the right distance between them. They then enter the carousel – the main part of the machine – where they come up against a plastic belt that slows the bottles down and rotates them.

The lever closure is transported along a metal guide until it reaches the right position above the bottle and snaps open. Next, the machine aligns the ceramic stopper and places it on the bottle. While this is happening, a high-speed camera photographs the rubber seal, which is then checked for traces of mould by an analytical software program. The lever closure is then pressed down firmly

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onto the bottle by a vertical pneumatic cylinder. The next part of the machine tests the swing stopper closure. If it is unable to open the lever, the closure is correctly positioned on the bottle.

## Results

The machine handles a throughput of 38,000 bottles per hour, although the percentage of properly-closed bottles is just as important as the throughput. "One hundred per cent just isn't possible," says Gazso. "But we can certainly reach 98 to 99 per cent."

Gazso will make use of Routeco's and Rockwell Automation's experience for his future orders from the US. "The collaboration with Rockwell Automation is an integral part of our expansion activities," he says. "The US



project also gave us a good opportunity to upgrade our control system technology."

Gazso was very impressed with the straightforward integration of the Allen Bradley components with the other parts of the machine. "From now on, we will be highlighting the fact that we offer Allen-Bradley components in our machines," adds Gazso. "That is particularly important in the US market."

## Additional Information

[www.rockwellautomation.com](http://www.rockwellautomation.com)

The results mentioned above are specific to AMS Getränkechnik's use of Rockwell Automation products and services in conjunction with other products. Specific results may vary for other customers.

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