



Automated Guided Vehicles (AGV) in use at AVO.

Ultimate flexibility for spice producer.



Project:

AVO Werke, Belm, Germany

Industry:

Food (spice producer)

Task:

Replacement of the manual transport system with AGV

Project duration:

06.2010 – 08.2011

Services:

- Three vertical order pickers EKS 210a
- Transport control software Traffic Manager

Most important results:

- Increased efficiency and productivity
- Ultimate flexibility for transport tasks
- Elimination of transport damage
- Cost savings
- Relieving pressure on warehouse personnel
- 100 % recipe tracking
- 98.9 % availability

100 % recipe tracking

'Taste and Technology' is the secret to the success of AVO, one of Europe's leading spice specialists. The associated desire for innovation and renewal constantly drives AVO forward in its search for appropriate technology on the market. The objective of this is to optimise its intralogistic processes and guarantee sustainable quality assurance and 100 % recipe tracking.

The optimum solution must guarantee both process simplification and efficiency

Given the need to relieve plant personnel of constant repetitive tasks, the option of using an Automated Guided Vehicle System was considered. This transport system had to fulfil the following requirements:

- High level of flexibility and rapid response times
- Adaptable to future expansion or new tasks
- Maximum availability

The company decided on our automated vertical order pickers EKS 210a

98.9 % availability and 18 transports per hour. This is our AGV's performance at AVO. Comprising the three components of fork lift truck, automation package and safety equipment. As a strategic partner and with advanced technology, machinery ready for integration and the guarantee of a high level of service, we have planned, designed and implemented the reorganisation of AVO's order picking area.

The requirement

Automation and optimisation of the intralogistic processes

The primary tasks of the new Automated Guided Vehicles are:

- a) Automated transport between the materials handling system and the large spice silos
- b) Transport of collecting containers for filling in the spice weighing area
- c) Depositing on the scales in order to add the components at the manual dispensing station
- d) Delivery to the materials handling system Its main advantage lies in its ability to provide 100 % recipe tracking.

This is why the AGV enters the filling lines beneath the spice silos. The recipes are filled directly into the spice containers at the filling line, without setting down the spice container and therefore preventing contamination from foreign substances.

With the many different attachment points which are moved to each container, a throughput of 18 containers per hour can be achieved. Thanks to the automation, errors can be eliminated and employees can be entrusted with other, more complex processes.

The solution

Three Automated Guided Vehicles EKS 210a

The Automated Guided Vehicles (AGV) used by AVO-Werke August Beisse GmbH are vertical order pickers from our production series, expanded with an additional automation package and the Traffic Manager transport control software. The AGVs receive commands from the production planning and control system (PPS System) via the wireless data system and perform them independently. While doing so, they are guided along predefined travel routes by the Traffic Manager. They use their laser navigation systems and position reflectors for this purpose.

Once the AGVs have completed a command, they transmit wireless confirmation to the system.

This confirmation contains all the information relating to the process. The PPS, which controls the AGVs, also manages the surrounding production process.

Included in this are, for example, the silos, scales and warehouse. The AGVs organise the transport orders they receive and complete them very quickly with no hold-ups despite very constricted conditions.

Customer statement

Flexibility and autonomy

"When we were considering automating our processes, there was no alternative to an Automated Guided Vehicle System.

The automated trucks are an important part of our overall concept that allows us to benefit from even greater accuracy in our mixtures," says Goran Milosevic, operations manager at AVO-Werke, when discussing the advantages of the Automated Guided Vehicle System.

"We can also fill numerous orders for small batch sizes with short turnaround times while processing the wide range of components.

We are also able to achieve the greatest flexibility possible and avoid contamination."



Goran Milosevic Operations manager of AVO-Werke, Belm, Germany.

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The logo features a red upward-pointing arrow above the word "JUNGHEINRICH" in a bold, black, sans-serif font.