Intelligent automation means faster delivery

Arvato Supply Chain Solutions begins AutoStore operations in Dortmund for fashion clients

September 9, 2021

Guetersloh – Arvato Supply Chain Solutions began use of the AutoStore system in Dortmund today, boasting the largest number of robots in one location in Europe. The system was built in a new hall with floorspace of 7,700 square meters and is specially designed for the rapidly growing online business of their international clients in the Fashion industry with a capacity of approximately 180,000 bins and 280 robots.

As a result of the pandemic in particular, the international supply chain management and e-commerce service provider saw a strong flow of online orders over the last months, the volumes of which often exceeded the seasonal peak volumes seen in the span of a year. "We assume that the order and inventory levels of our fashion clients will double by 2024," explains Christoph Echelmeyer, location manager of Arvato Supply Chain Solutions in Dortmund. "In order to be prepared for the growth of new and existing clients, and at the same time optimize material flow, we invested early in the expansion of the logistics center and new automation technology." Solutions for warehouse automation are an important part of the comprehensive digitalization strategy of the company and have been successfully implemented at multiple locations in Europe. Arvato's concept relies on the use of standardized modules which can be used as needed to deliver a final, individualized concept for each project.

AutoStore – the automated small-parts storage system

The construction of the new hall, which also has a 1350 square meter mezzanine, was completed in March this year. The intralogistic systems were implemented directly thereafter. "We created the basis for automated processing of incoming goods, storage, and picking," says Echelmeyer. "Additionally, we set up central incoming and central outgoing goods departments with a sorter and packing stations on two levels." After analysis of different automation options, Arvato Supply Chain Solutions decided for an implementation using the AutoStore order fulfillment system. Together with the general contractor Swisslog, specialists for integrated automation solutions, one of the largest automatic small-parts storage systems in Europe was installed. It uses a modular, three-dimensional grid and self-contained storage bins which are picked up and moved to picking stations using autonomous robots. It ensures optimal use of space, using 40% of it compared to conventional rack storage systems. Due to its compact design, AutoStore – including its workstations – need a total of 5,100 square meters of floor space, which meant a perfect fit in the new hall. Thanks to the special design in which 16 bins each with a height of 33 cm can be stacked on top of each other – and the ability to store several articles in the same bin – the available space could be used optimally. The roughly 181,000 bins stacked in the grid
PRESS RELEASE

provide space for more than two million articles. The storage and retrieval processes are carried out by 280 intelligent, battery-operated Red Line robots that move on a rectangular aluminum framework serving as the railway on top of the grid. Every robot can reach all grid positions and picking stations. If robots need to access bins that are not at the top of the stack, they reposition them.

In addition to the AutoStore system, a narrow aisle warehouse for large-volume articles was installed in the existing hall and the original shelving system for hanging goods was modified. The new central incoming goods area is also located here and its integration with AutoStore in the existing hall circumvented the need for additional conveyor systems. New goods are booked into the system and packed into the appropriate container. Ten workstations are available for this task, equipped with three conveyor ports, each offering a different bin division layout to correspond with different article requirements. Each workstation can fill 92 bins per hour. Goods are dispatched through 16 so-called carousel ports designed for high picking performance; they are equipped with three arms to move bins to the workplace quickly. Articles can be removed from the bins through an opening in the port and placed in sorting trolleys with the help of a put-to-light system.

"The new AutoStore system increases productivity and throughput tremendously at this location," says Christoph Echelmeyer. "With this innovative storage solution, we can easily cope with the massive volume growth in online orders of our Fashion clients and are positioned optimally for future growth."

About Arvato Supply Chain Solutions:

Arvato Supply Chain Solutions is an innovative and international leading service provider in the field of supply chain management and e-commerce. Partners come together with industry specialists in the fields of Telecommunication, Tech, Corporate Information Management, Healthcare, Consumer Products and Publisher. About 15,000 employees work together to provide practical and relevant solutions and services worldwide. Using the latest digital technology, Arvato develops, operates and optimizes complex global supply chains and e-commerce platforms, as the strategic growth partner for its customers. Arvato combines the know-how of its employees with the right technology and appropriate business processes to measurably increase the productivity and performance of its partners.

For more information, please visit http://www.arvato-supply-chain.com.

Arvato Supply Chain Solutions is part of Arvato, a leading international service provider. More than 70,000 employees in almost 40 countries develop and implement innovative solutions for business customers all over the world. These include SCM and IT solutions as well as financial and customer
communication services, which are continuously developed with a focus on innovations in automation and data/analytics.

Globally renowned companies from a wide variety of industries – from telecommunications providers and energy providers to banks and insurance companies, e-commerce, IT and Internet providers – rely on Arvato’s portfolio of solutions.

Arvato is a division of Bertelsmann.