

CASE STUDY ALNATURA



RELIABLE AND HIGHLY DYNAMIC LIGHT GOODS PARTS STORAGE WITH CYCLONECARRIER

CUSTOMER AND REQUIREMENTS

Ecology and sustainability are top priorities for Alnatura Produktions- und Handels GmbH. Founded in Bickenbach, Germany in the mid-1980s, Alnatura distributes organically produced foods, personal care items and textiles which are sold by a number of retail partners as well as in over 100 company-owned organic supermarkets in Germany and Switzerland. To meet the growing demand for its more than 1 200 organic brand products, Alnatura has been investing continuously in efficient and sustainable logistics structures. First the company centralized its distribution logistics at its Lorsch site. Then, with the help of Swisslog, it built a fully automated high-bay warehouse made of wood. In early 2016, Alnatura took yet another groundbreaking step, this time to optimize the supply structure for delivering products to its store locations: Alnatura will implement the innovative and highly dynamic CycloneCarrier warehouse shuttle system from Swisslog. This will allow the company to supply its expanding store network with low-

volume personal care items from one central location in a way that is both environmentally sound and shortens transport routes. The CycloneCarrier facility is scheduled to go into operation in early 2017.

THE SOLUTION

The centerpiece of the solution is a two-aisle shuttle warehouse with 19 levels each. On each level in each aisle, a rail-bound shuttle vehicle (CycloneCarrier) performs high-speed storage and retrieval operations. The workstations and the storage system are connected via continuously operating conveyors. Repacking stations installed at the receiving end are used to receive goods and fill them in storage bins. After repacking, the bins are put away in the light goods storage system. All storage bins are part of a closed circuit. This means that each bin will return to receiving once it is completely empty. Multi-order picking stations installed at the shipping end are used to pick orders into store-specific bins, which are then palletized and transported to their destination. The shipping bins are also part of a circuit. After

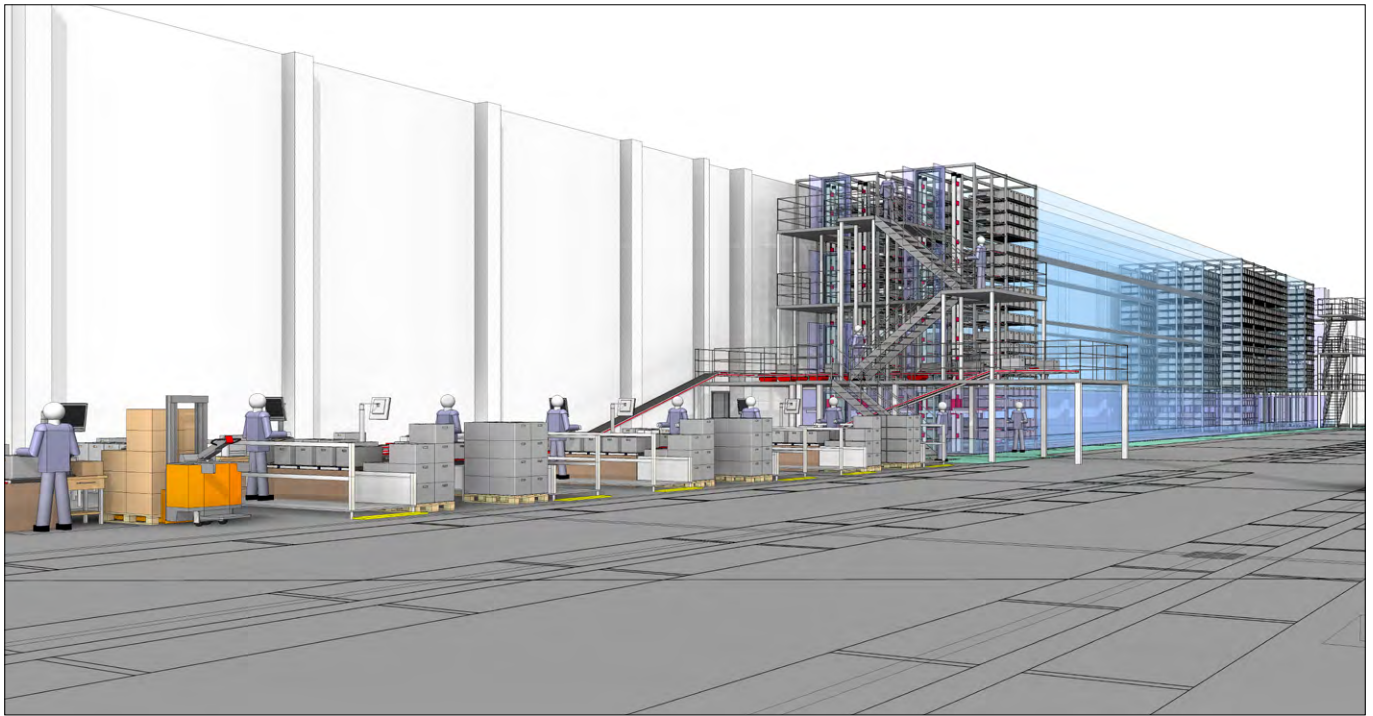
delivery, the store bins are transported back to the distribution center and return to the workstations.

SEMI-AUTOMATED PICKING USING CYCLONECARRIER

In the first phase, the high-speed shuttle warehouse will have a capacity of 13 480 bin locations. If needed, there is enough space to expand the storage capacity at a later time by installing another rack unit with additional shuttle vehicles as well as picking, repacking and shipping bin stations.

WAREHOUSE MANAGEMENT AND CONTROL

The Swisslog-implemented project uses state-of-the-art IT infrastructure and control technology. The shuttle warehouse system will be connected to the existing higher-level warehouse management software. The



Swisslog-designed CycloneBox control software ensures seamless interaction between all shuttle warehouse components. It coordinates and monitors all processes so that all storage and retrieval operations run flawlessly.

FACTS AND FIGURES AT A GLANCE

CYCLONECARRIER SHUTTLE WAREHOUSE

No. of aisles	2
No. of rack levels	19
No. of shuttle vehicles	32
No. of bin locations	13.480
No. of storage bins	9.800

WORKSTATIONS

No. of picking stations	3
No. of repacking stations	2
No. of shipping bin palletizing stations	1

ADDITIONAL SCOPE OF SERVICES

Continuously operating bin conveyors (connecting system)
Material flow computer and lower-level control
Connection to existing higher-level warehouse management system

BENEFITS

- Efficient and highly dynamic flow of goods from receiving to storage and picking to shipping and store delivery
- Superior performance of technical components
- Centralization of light goods logistics in one location
- Safe and quiet warehouse operation
- High availability of shuttle warehouse and picking system
- High-performance software for perfect control of all shuttle warehouse components