Lufthansa Technik Logistik Services (LTLS).

Reliability is the key.

The extension of the replacement parts warehouse of Lufthansa Technik Logistik Services (LTLS) marked a milestone for the stationing of the new Airbus A350 at Munich Airport. The centralisation of operational warehouse management meant that decentralised storage areas could be eliminated at the airport. Synergy effects brought about an optimisation of internal material flows and a reduction in the transport routes and rental costs. The intralogistics specialist STILL along with the shelving manufacturer SRZ Systeme were called on to provide warehouse technology for large aircraft components. For small parts, automatic block storage supplements the sophisticated warehouse technology.

Lufthansa Technik
Logistik Services

Sector: Logistics for the aviation industry
Company: 1,300 employees, EUR 247 million (2016), headquarters: Hamburg
Challenges: Replacement parts warehouse extension to centralise operational inventory management. 50,000 items and 80,000 storage locations including provision of some 700 aircraft components for the new Airbus A350.
Solution: STILL warehouse technology for large aircraft components in partnership with the shelving manufacturer SRZ Systeme. Including automatic block storage.
STILL products: General contractor and intralogistics consultation including material flow and vehicle deployment analyses. Forklift trucks: MX-X VNA truck, FM-4W four-way reach truck

Stationing of the new Airbus A350 at the Munich site

Lufthansa has already stationed three Airbus A350 long-range jets at the Munich site, with 12 more to follow. “Our former replacement parts warehouse was bursting at the seams. The new capacity enables us to guarantee a reliable supply of materials and punctual provision of some 700 aircraft components for the new Airbus A350,” emphasises Oliver Hartung-Senger, Head of Central Affairs and Projects. The project manager Anna Henrichmann adds: “The new storage capacities create the conditions for new growth. In addition to the Airbus A350 components, components for 15 other aircraft models are stored in the replacement parts warehouse.”

Cutting-edge warehouse technology in the tightest of spaces

The surface area available for the construction of the new building was limited to 3,200 m². Building and warehouse technology were perfectly synchronised to save as much space as possible. The automatic block storage for small components is therefore installed on the top floor of the new hall. Six liftports on the ground floor are used for warehousing and retrieving containers. The small parts warehouse optimises itself. Ten controlled robots are placed on the grid of the storage blocks to restack and transport the containers, so the fast movers are always at the top.

Comprehensive analysis and planning

The product range in the new replacement parts warehouse includes some 50,000 items in 80,000 storage locations. The storage systems were therefore structured according to the size of the aircraft components. As the responsible general contractor, STILL first carried out a material flow and truck application analysis, including for larger components. During planning and design, questions about fitting the storage areas with different shelving systems, including personal protective equipment, were answered and visualised.

Owing to the swinging retractable fork of the MX-X, narrower aisle widths or, with the integrated cover, larger safety clearances can be achieved.

With STILL's highly manoeuvrable four-way reach truck FM-4W, loads can be easily picked and transported forwards, backwards and sideways in the tightest of spaces.

High pallet shelving: flexible and variable inventory management

After the analysis, high shelving systems were designed for 250 wheel pallets and 1,300 pallets. In accordance with requirements, the shelving rows can be adjusted with gridded floors. That way, not only the wheel pallets, but also non-palletised components such as individual profiles and bars can be stored on the high shelving.

Two STILL MX-X Very Narrow Aisle trucks operate the shelving rows. Owing to the swinging retractable fork, narrower aisle widths or, with the integrated cover, even larger safety clearances can be achieved. In contrast to fixed shelving equipment, the MX-X can change aisles as needed. This guarantees not only variable inventory management, but also maximum flexibility in the pallet warehouse.

Cantilever shelving: storage optimisation for bulky goods

Two cantilever shelving units with some 100 cantilevers were built for long and bulky components. With STILL's highly manoeuvrable four-way reach truck FM-4W, loads can be easily picked and transported forwards, backwards and sideways. The smart four-way design also allows for a highly cost-effective use of warehouse space because the reach truck can be safely and quickly manoeuvred down even the narrowest of aisles.

The integrated weight and height display and the comfortable tilt seat greatly facilitate load handling, while the mast, camera and overhead guard are designed to optimise the driver's view of the transported load.

STILL's MX-X guarantees variable warehouse management and maximum flexibility in the high shelving warehouse.

Batteries are stored on the ground floor of the platform system to keep them fresh.

Platform system: efficient warehousing right up to the ceiling

With the two-storey platform system, the storage space can be used economically and flexibly right up to the ceiling. For non-palletised goods, different shelving systems were installed on the various floors. For example, batteries are stored on the ground floor to keep them fresh. Electronic components for on-board computers, mirrors, long and plate-shaped special sizes are also stored here safely. Hanging components are located in the shelving units on the two upper floors.

Summary

The interplay of cutting-edge and efficient warehouse technologies guarantees reliable supply of materials and punctual provision of the aircraft components. "With the new replacement parts warehouse, we can react flexibly to different job loads. At the moment we already manage some 700 stock movements every day in three shifts, seven days a week," summarises a very satisfied Oliver Hartung-Senger.

STILL GmbH
Berzeliusstrasse 10
22113 Hamburg
Tel.: +49 (0) 40 / 7339 2000
Tel.: +49 (0) 40/ 7339 2001
info@still.de
www.still.de