

Warehouse management with LFS 400

From the introduction across the basis module to complete warehouse management with LFS 400

The logo for S. Oliver, featuring the brand name in a red, cursive script font with a registered trademark symbol.

S. Oliver. Consumers associate this brand name with sportive leisure clothing. Within the past years, the S. Oliver Group has remarked a strong growth. The collection has been extended; the business activities of the company on the national market have grown and also on the international market, the group is represented with an over-all exportation share of 15 %. The goods are distributed to more than 3,000 clients, among them both shops and stores in Germany and partners and clients abroad.

Due to the strong company growth, new logistic solutions were needed. The management reacted. Since the middle of 2002, the textile producer S. Oliver provides of a modern logistics centre in

Rottendorf near Würzburg. The warehouse contains 1,983 bin locations for Euro-pallets with an over-all surface of 5,800 sqm. All warehouse functions and logistic processes that were partly handled by an external service provider before can now be directly handled in the own warehouse.

The processes in the picking area were before already managed by S. Oliver. However, a completely new concept was needed for the new high-bay warehouse.

The goal of the installation of the new high-bay warehouse was the reduction of warehousing costs, the improvement of the availability of the goods for customer orders and the extension of the capacities for the handling of bigger shipping units. For the direction of the warehouse processes, the introduction of a new warehouse management system was required. A better planning of quantities and processes and guaranteeing a flawless data comparison by the connection with the existing goods management system was expected.

In the newly installed high-bay warehouse, S. Oliver decided to use LFS 400. Several points were decisive for this choice:

- 1.) The LFS 400 standard module covers S. Oliver's requests to a large extend. Minimal adaptations in the section of the data interface to the applied enterprise resource planning system were necessary.
- 2.) The decisive criterion for the use of LFS 400 was the modular conception of the system. The expandability of the system offers S. Oliver a development basis for future logistic plans. Warehouse functions and processes can be extended any without problems; the preconditions therefore are given by LFS 400.
- 3.) The already existing hardware platform AS/400 should still be used by S. Oliver. The high breakdown-protection of the AS/400 and the already existing enterprise resource planning system were supposed to cooperate with a warehouse management system on a hardware system.



Logistics centre in Rottendorf near Würzburg/Germany

The go-live of LFS 400 could be realised timely with the completion of the logistics centre in Rottendorf in August 2000.

The processes in the high-bay warehouse

The basis module of LFS 400 is firstly used in the new S. Oliver high-bay warehouse.

In the logistics centre, the goods are prepared for storage in the goods receiving area. Recording the single pallets of one receiving area and the putaway of the goods are realised in LFS 400 via radio frequency and voucher-less.

Goods receipts from production are announced via the enterprise resource planning system and transferred to the

warehouse management system (WMS) via an interface. The WMS generates a goods receiving number for each process, which is displayed in a bar-coded form. On this item note, the goods receiving number and the item to be put away are imprinted.

The goods receiving number and the bar-coded item number on the note are scanned. The single pallets of the goods receiving can now be recorded. Each pallet is now marked with a load unit number via a pallet shoe. With this number, each pallet can be identified any time. Pallets that have already been marked can be put away.

Before putaway, an examination piece of the item is controlled and weighed. As always the entire quantity of an item is stored or released, the weight and volume



Scanning of goods in the high-bay warehouse



High-bay area in the stacker crane (rack head)

of the later freight (load) can be calculated with the help of the allocated load unit number during putaway.

The putaway of the goods is realised in two stages. At first, the front zone vehicle (fork lift) has to transport the pallet to the head of the rack. This is necessary as the stacker crane is only used in the rack aisles. The vehicle scans the load unit number on the pallet shoe and picks up the pallet. The destination of the pallet is indicated for the employee. He leaves the pallet at the head of the rack and confirms this procedure by scanning the buffer location label. There, the stacker crane can carry the pallet. The employee recognises that the pallet is ready for putaway at the head of the rack. He scans the load unit number of the pallet, receives an indication of LFS 400 of where to putaway the pallet, leaves it there and scans the bin location label for confirmation. For the putaway of items which are not recorded in the company master data of S. Oliver, the LFS 400 module "Parking" is available.

Any items, like for instance paper board containers, can be put away via this search criterion.

In LFS 400, several strategies for putaway and retrieval are available. As with S. Oliver, uniform box sizes are recorded and as they only work with the stacker crane in the racks, dynamic storage location management by the system with little gear shifting in the high-bay warehouse is planned. Retrieval is always realised according to the FIFO-principle.



Hanging dispatch area / picking NOOS / picking area

With retrieval, the according items are recorded in the enterprise resource planning system and transferred to LFS 400, where assignment of the load units to be released takes place.

The pallets are firstly carried by the stacker crane and transported to the head of the rack. Here, they are picked up by the front zone vehicle and left at the tarmac in direction of the picking area.

With S. Oliver, an extension of the LFS 400 operation is planned both in the hanging dispatch and the picking area. Thanks to the design conception of LFS 400, the change of processes can be realised any time and without problems.

Project realisation

The collaboration with the company Ehrhardt + Partner was, according to S. Oliver, very positive. Especially the customer-oriented planning, the on-time realisation and the competent project support by the company of Ehrhardt + Partner have been emphasised. A support can always be realised via remote data transmission.

The modular design of LFS 400 offers the company an extendable basis for future logistical developments. As an introduction, LFS 400 can be used in different warehouse sections – with the option of an extension on other sections in future.

For more informations, please contact to:



EHRHARDT + PARTNER

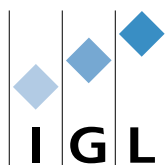
**Ehrhardt + Partner GmbH & Co. KG
Software Systems
for Warehouse Logistics**

Alte Römerstraße 3
D-56154 Boppard-Buchholz
GERMANY
Phone (+49) 67 42 - 87 27 0
Fax (+49) 67 42 - 87 27 50
Email: info@ehrhardt-partner.com
www.ehrhardt-partner.com



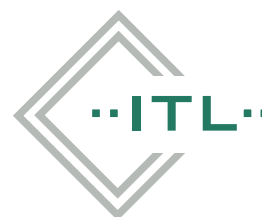
INSTITUT FÜR ANGEWANDTE
WAREHOUSE-LOGISTIK

Boppard-Buchholz, Germany



Informática y Gestiones
Logísticas, S.L.

Figueres, Spain



Boppard-Buchholz, Germany