



CASE STUDY



1 | Challenge : **Maximization of battery availability with cross-shift driving times**

One of the leading food retailers in Germany asked HOPPECKE for help, because he needed a new concept for charging and changing the batteries of his vehicle fleet. This way, the availability of the vehicles should be held upright despite cross-shift driving times.

Nowadays, food can be bought everywhere, which creates the task for food retailers to meet the never-ending demand accordingly. Especially the supply chain of fresh products has to be exactly planned to keep up an impeccable quality until the food reaches the end customer.

The processes and performance of logistic centres play an important role in reaching that goal. An equipment with many industrial trucks means a higher added value – simultaneously, the need for an appropriate number of charging options grows in order to guarantee a permanent availability of the forklifts.

With the new construction of a logistics centre the retailer aimed at handling the growing number of orders. The vehicles were already driving across shifts; a fast and easy battery change on each vehicle was therefore necessary.

The customer was looking for a plant which offered a clear sight of each device and battery and which was easy to use. Moreover, ensuring occupational safety during the battery change played a decisive role. In order to optimally utilise the fleet, the charging and switching process should be designed as efficiently as possible.

Cross-shift driving times
of the vehicle fleet

Battery changing strategy
up to now not efficient

Many picking vehicles
need a good charging strategy

No overview over the battery status



„A generously dimensioned charging station with a simple changing device has made it possible to increase the availability of the fleet and meet the customer requirements accordingly.“

Martin Franke
HOPPECKE Motive Power

Maximization of the cost-benefit effect

Availability of 60 charging stations

User-friendly battery change

Lower cost of repair

2 | Solution : Installation of a charging station for permanent battery availability

With a well elaborated concept HOPPECKE showed the customer the benefits and advantages of the solution.

To guarantee a continuous supply of charged batteries for the vehicle fleet, a charging station with altogether 60 spaces was installed at the logistics centre of the retailer. The used space was minimised by an installation of the charging devices on shelves. The used trak | Xcharge CS racks are able to carry all usual types of charging devices and therefore enlarge the flexibility of the application for the customer.

Another important point has been the warranty of occupational safety. For this purpose, gratings were installed on the back of the racks as a reach-through protection. To make the battery changing process as easy as possible for the user, HOPPECKE delivered two trak | Xchange TU changing devices. They support the ergonomic battery change with a built-in height adjustment. Moreover, they enable a nearly permanent

use of the industrial trucks with a change duration of two minutes average.

When operating with so many batteries, chargers and vehicles, a regular and reliable control of the components is necessary to keep up frictionless and efficient processes.

With the trak | monitor 4.0 System, HOPPECKE offers the customer an effective monitoring-tool, which can communicate real-time data of the batteries and charging devices to the user. Furthermore, disruptions of the components are recognized by the system at an early stage. When a battery change is due, the smart trak | monitor 4.0 suggests the battery that has reached an optimal state of charge to the user. On a long-term sight, the use of a monitoring system leads to a significant reduction of costs because of lowered repair and maintenance costs.

The solution implemented in the distribution centre of the food retailer offered a maximum cost-benefit effect and led to the highest possible operational readiness of its fleet, which has significantly increased the efficiency of its processes. Another station for the location is already being planned.

Key Benefits

- Minimal use of space through a stack construction
- Changeover device allows fast change of batteries
- Safety of the plant through reach-through protection
- Control of the devices through a monitoring system

3 | Products :

- ▶ **Charging racks:** trak | Xcharge CS
- ▶ **Battery changing device:** trak | Xchange TU
- ▶ **Battery management system:** trak | monitor 4.0



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