



## Imperial Logistics International Textbook warehouse management in Wallersdorf

In December, BMW opened their new distribution centre and warehouse for spare parts. The site in Wallersdorf is a new site for the central parts distribution. Central parts distribution is responsible to supply the regional BMW warehouses worldwide with spares and accessories. The BMW Group assigned the warehouse management to Imperial Logistics International and the operation of the distribution centre to Kühne & Nagel. The employees at Imperial ensure a fast, flexible and secure flow of materials in the central warehouse with a fleet of STILL trucks. A total of 211 industrial trucks and tugging trains, each specifically adapted by STILL to fit the respective intended application handle the loads at the operation.



**Industry:** Warehouse management of large-volume and fast-moving BMW spare parts in the site in Wallersdorf.

**Solution:** 211 individually configured and equipped STILL trucks together with a STILL FleetManager 4.x. software solution

**Products:** RX 20 and RX 60 electric forklifts, FM-X reach trucks, EK-X vertical order pickers, R07 and LTX 70 electric tractors, EXV, ECU and EXU high and low lift trucks, fleet management software FleetManager 4.x.



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## The world-spares-parts-warehouse

The 235,000 square meters of covered space in adjacent buildings, each separated by fire protection walls in Wallersdorf make up the largest single site for the BMW Group “Aftersales” logistics. Joined up with the 144,000 square-meter warehouse space in Brucksberg, close to Landshut and the Dynamics centre in Dingolfing, the site in Wallersdorf will make up the central parts distribution for the worldwide spare parts supply of the group. The restructuring of the central parts distribution is one of the largest warehouse and logistics projects in the whole of Europe. While the overall capacity of the centre was increased during the consolidation, different warehouse settings were joined up in combination with a switch over to warehouse management by access frequency and not by size of the parts any longer.

Now the Bruckberg site holds an extraordinary broad range of parts which are, however, required less frequently, while the new site in Wallersdorf operates in dual function for the central spares distribution. 49,000 square meters are used by Kühne & Nagel to handle transports with virtually all spare and accessory parts. From there the parts are distributed to the other sites. Besides this, Wallersdorf runs a 178,000

square-meter warehouse for bulky parts that are in frequent demand. With a rough total of 3,500 spare part items, this site only covers about one per cent of the total number of items - but these are the fast movers in the product range. This way Wallersdorf warehouses large quantities of frequently needed wear parts such as oil filters or brake discs.

Imperial Logistics International with its headquarters in Duisburg was assigned the warehouse management. Imperial has been a BMW Group partner for many years in inter-factory logistics and contributes great experience in automotive and spare parts logistics to the operation.

## Optimum warehouse management with electric industrial trucks

Electric industrial trucks from STILL are deployed to optimally run the flow of material from good-in to order picking, to packing and to despatch. In goods-in, for example RX 60 electric trucks with joystick control playfully lift up to four cage pallets with heavy brake discs at once off the lorries, altogether weighing up to 5 tons.

The fast RX 20 move these parts into the block storage. With the triple masts, cage pallets can be stacked up to five levels high. Its ability to turn on the spot makes the RX 20 extremely manoeuvrable. This is also why these trucks are preferred to load and unload the lorries as well as handling materials at the stations for the tugger trains. Inside the dark cargo bays of the lorries, the bright LED spot lights ensure good illumination for swift work. Without having to leave the cabin, the drivers can quickly and flexibly adjust the fork arm positions on all electric trucks with the hydraulic twin fork arm adjustment. The project manager at the STILL branch in Munich





Bulky parts like bonnets are order-picked with reach trucks from the high-bay rack. The FM-X flexibly organises unexpected transports and replenishments.

Clemens Festner, adds: „And our trucks are also fitted with the STILL SafetyLight 4 Plus for better safety.” The bright and enduring LED floor spots are very focused and therefore the light is also well visible on light floors. Roughly five meters behind the truck they warn others of the approaching truck and help to prevent collisions. The four moving light spots on the floor draw pedestrian's attention faster towards the truck, creating more time to react.

All STILL RX 20 are equipped with the safety restraint system HRS-E Duo. The bar on the right side of the truck is fixed. The protection bar on the left side opens and closes manually. While open, the maximum speed of the truck is restricted to five km/h. Nearly all units of the centre operate electric STILL tiller trucks to run the warehouses, preferably EXV, ECU and EXU high lift and low lift trucks.

### **Tugger trains make goods go round**

When working under full load, the goods reception of the distribution centre alone expects 250 tugger train movements per day. In the spare parts warehouse, STILL tugger trains running along pre-defined routes serve the stations of the block storage for medium and large sized parts and the 54 outbound loading lanes. The powerful and robust R 07 tractors from STILL can tow loads of up to 25 tons distributed on three trailers. With the comfortable battery change over the side with a counter balance truck or a low lift pallet trucks, the R 07 tractors can be filled with fresh energy in minutes. Safe and smooth transport of the goods through the warehouse is guaranteed by the sensitive acceleration and steering characteristics of the trucks. Turn indicators make the tractors clearly visible to others and the good lateral stability makes cornering safe. The very manoeuvrable tugger trains are a perfect fit to pass the narrow “unit” gates that connect the different areas of the buildings.





Cage pallets to re-pack goods for overseas shipments are moved with the electric LTX 70 tractors. They are outstandingly manoeuvrable and tow up to 8 tons.

Besides this, the low wear and the long maintenance intervals of 1,000 hours of operation are other notable features of the tractors. 95 per cent of all materials used can be recycled.

Cage pallets to re-pack goods for overseas shipments are moved with the electric LTX 70 tractors. This three-wheel tractor is outstandingly manoeuvrable and capable to tow up to 8 tons of load. The enduring and eco-friendly LED daytime running lights make the tractor clearly visible in all conditions. After re-packing the disposable packages are moved to the scales by the LTX tractors and then passed on to the outbound loading lanes. The automatic parking brake ensures safe start of driving on ramps. The inclination indicator always keeps the driver informed about the angle of the slope the tractor is passing over.

### **Powerful order picking**

After log-in to the BMW host system, it sends the pick lists directly to the terminals mounted on the trucks. The installed scanners and label printers quickly list the required picks along optimised routes. Large parts, like bonnets are stored in the high-bay racks and safely picked from the top levels of the rack by STILL FM-X reach trucks. The precise mast shift and the intuitive controls such as the Joystick or Fingertipp help drivers to focus and concentrate on their work. Also unexpected transports or replenishment supplies are flexibly organised with the FM-X in the central spare parts distribution. Medium parts, like brake discs and air filters are picked by the STILL EK-X vertical order picker. These trucks are mainly used to pick orders from the lower levels of the rack. Clips mounted on the battery compartment allow to store additional boxes.

The head of planning and consultation at Imperial Automotive for the south of Ger-





The powerful and robust R 07 tractors from STILL tow loads of up to 25 tons distributed on three trailers. Changing the battery over the side for fresh energy only takes a few moments.

\*Special customer option

many, Tobias Fenzl, points out: “Currently we are already handling one third of the total storage volume of the spare parts warehouse. Our target for full load operation will equate to a volume of about 100 overseas containers per day.”

All order picker trucks are fitted with a 24V/5A socket for the modern STILL touch screen data terminals. Also the additional mounts for terminals, barcode scanners and label printers have been mounted by STILL just as the preparation to mount the aerials.

## FleetManager ensures transparency and flexibility

Special orders or many road accident in a short period due to suddenly poor road conditions may cause unexpected peak workloads. “To a certain extent, the variable number of trucks in the fleet allows us to react flexibly to such events. Due to the BMW equipment on the trucks, we cannot directly relocate the trucks to different areas of the warehouse,” says Tobias Fenzl.

The FleetManager tool from STILL that we use to manage the fleet transparently helps us in this. If such peak workloads occur, the control stand can use the FleetManager to check which trucks in other areas of the company could be relocated. Then, these truck can be reconfigured in the BMW host system. To allow quick retrofitting of the new trucks with the necessary equipment, additional carriages are available in a backup pool.

The FleetManager records the complete service life of the truck - including number of operating hours, driver allocation or damages and maintenance performed. The respective analyses and reports are available at any time. “To plan the use of the trucks and to schedule maintenance intervals, this data is indispensable. Besides this, the allocation of the trucks ensures availability. If required, the necessary trucks are reliably available to the respective departments. Manually managing the fleet





Parts like brake discs and air filters are picked by the STILL EK-X vertical order pickers.



would be very confusing and virtually impossible, given the sheer number of trucks and the size of the different areas of operation.” Imperial's planning manger impressively illustrates.

For the FleetManager, all the trucks have been fitted with a SIM card, similar to a cell phone. Before using the truck, the drivers have to log on and check the truck for possible defects, because damages by external force are not covered by customer service. The individual access authorisation makes sure that only qualified staff operates the trucks.

Should an accident occur, the trucks are automatically set to inching. Only after the incident has been reported will the unit reset. In case of defects, the electronically transferred data can be read directly by customer service to enable fast repairs.

## Summary

From the warehouse site Wallersdorf bulky and fast moving BMW spares are moved to the Bavarian central warehouse. Tobias Fenzl, sums satisfied: “In combination with the STILL-FleetManager and the STILL fleet, we can economically operate the spare parts warehouse at maximum flexibility with fastest reaction times at top safety levels.”

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