



# Automated replenishment optimizes manual order picking

Cimcorp's MultiPick system automatically picks every full crate of products to be delivered to the customers. The smallest unit that is order-picked automatically is a single crate. Split crates are picked manually.

Manual picking is improved considerably when an extra feature is added to MultiPick, allowing replenishment crates to be transferred automatically to the manual picking racks. Automated replenishment accelerates order picking and reduces picking errors.

In practice, a replenishment transfer car runs between the MultiPick robot and the manual picking racks, moving the replenishment stacks from the outfeed conveyors under MultiPick to the order picking racks in line with the rhythm of manual picking. The MultiPick robot collects the products going to the manual picking racks from the stock on the floor under the robot. The Cimcorp Warehouse Control System (WCS) that guides order picking combines the needs of the manual picking area and the operation of MultiPick. When a product required in manual order picking falls below the alarm limit, MultiPick fetches the necessary replenishment batch from the stock and delivers it to the replenishment transfer car feed conveyor. Replenishment may take place with individual crates or crate stacks.

The stacks in that case are mixed product stacks picked for the manual picking area.

system and a stack from the MultiPick area is placed on board. Then the transfer car moves to the channel to be replenished and rises at the same time to the right height. The conveyor under the stack in the transfer car is thus at the height of the base of the flow-through channel.

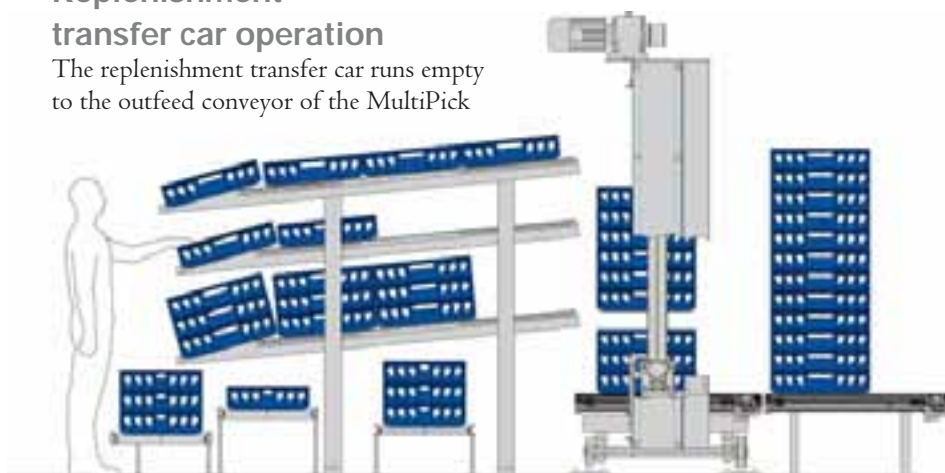
The lifting device in the car grips the stack and lifts it so that a maximum of the three lowest replenishment crates remain on the transfer car conveyor. The conveyor is started and moves the crates into the flow-through channel. If another stack can also be moved into the same channel, the elevator lowers the stack onto the conveyor, again grips the stack at the right point, lifts it up and the conveyor transfers the crates into the channel.

Finally, the stack in the transfer car is lowered onto the transfer car conveyor and the transfer car simultaneously moves to the next channel for replenishment. When the transfer car has been emptied, it fetches a new replenishment stack.

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## Replenishment transfer car operation

The replenishment transfer car runs empty to the outfeed conveyor of the MultiPick



## WORD FOR WORD

# Real-time balance

Earlier, an inventory had to be taken in warehouses at regular intervals, to find out which products were in which place and how many of them there were. Perpetual inventory is impossible in a quick-turnover distribution center. An automation system is able to solve the inventory problem so that the data system manages the stock situation in real time.

A real-time balance gives the current situation of what the product is, how much there is and exactly where in the handling stage it is. A warehouse control system keeps a real-time stock balance of products from the moment they are transferred from production to the distribution center, until they are ready for loading into delivery trucks at the loading dock. A warehouse control system not only manages the quantity of products, but also knows in which handling stage each product is. The product may be in the buffer storage, in the ripening room, in quarantine, in the order-picking storage or already picked. Product management is precise. The system can distinguish between different date stamps and production batches of the same product. Products produced at different times are treated as if they were different products. This ensures that the products manufactured first leave for distribution first.