



Marktkauf Logistik boosts performance by 85% using the Pick-n-Go[®] concept

Marktkauf Logistik GmbH, a subsidiary of Marktkauf Holding GmbH, announces 85% increased performance using voice technology with automated guided vehicles to boost productivity at its logistics centers in Bielefeld and Laichingen.

To increase productivity and reduce error rates in the Bielefeld and Laichingen DCs, Marktkauf implemented Talkman voice technology from Vocollect, the world's leading supplier of industrial voice systems. Its wearable voice computers and special headsets, tailored to industrial environments, are in use on six continents. The Marktkauf Talkman solution is integrated by leading logistics IT solution integrator Dematic GmbH and managed by their Voice Manager Software.

The voice-directed distribution solution enables the wearer to communicate verbally with the warehouse-management system (WMS). Order-pickers are guided through their tasks via spoken instructions, confirmed verbally by the picker, increasing productivity by some 10%. The operators' hands are kept free, as is their field of vision, enabling them to focus fully on their actual work.

Despite this improvement, analysis showed, that inefficiencies still remained where order-pickers had to manually move the vehicle carrying the palletted goods. Torsten Winter (chief operating officer at the DC in Laichingen) and his team developed the idea that warehouse vehicles should automatically escort the order-pickers, enabling them to place goods directly onto a pallet ready and waiting beside them. As Winter explains, "the combination of voice-directed picking and automated transport gave rise to the 'cocker spaniel' method. Like a dog, the vehicle always remains right beside its 'master' or 'mistress'."

The concept is becoming well known as the *best practice in picking* – or Pick-n-Go from Danaher Motion.



During the course of the project, 17 order-picking vehicles and 10 regular pallet vehicles in the Laichingen warehouse were upgraded with the automation package. The AGV control solution from Danaher Motion is the core part of the package. The company's laser-navigation platform, which has been introduced at Marktkauf Logistik by Danaher Motion's partner E&K Automation Eilers & Kirf GmbH, is already successfully in use on well over 6,000 AGVs worldwide.

The control solution from Danaher Motion consists of mobile hardware and an array of software elements. A system software package is installed and forms a type of "control room" to optimize the traffic and transport flow. This solution has been integrated to the WMS via the Dematic Material Flow Controller (MFC). It is programmed to let the vehicles move precisely with the order-picker as he moves along each aisle and thus enabling the Pick-n-Go concept. This enables the order-picker to steer the order-picking truck without the need to talk directly with the vehicle.

Thanks to the perfectly positioned vehicles the distance to carry the goods is shortened, thus also improving picking ergonomics. If the pallet is empty, the vehicle automatically raises it to the operator's working height. When the pallet is full, the system directs a new AGV with an empty pallet to the order-picker. It remains behind him until the vehicle with the full pallet sets off in the direction of the goods-dispatch area. The new AGV replaces the first immediately, without any intervention by the operator, as the system calculates the load level of the current pallet automatically and controls all subsequent steps.

Thomas Preller, Head of Order Fulfillment Solutions at Dematic Logistics IT: "If you stand in the central aisle of the warehouse and watch the order-picking process, you will clearly see how much quicker the operators work than before with the support of an automated vehicle." Since the AGVs were introduced, order-pickers have been using about 76% of their total working time for picking up items and stowing them, compared with 41% for these core activities previously. This has boosted productivity at the Laichingen warehouse by about 85 percent. Given these figures alone, Marktkauf's investment has quickly paid for itself.

Impressed by this success, Marktkauf Logistik has also equipped its logistics center in Bielefeld-Sennestadt with voice, 23 automated order-pickers and 17 regular AGVs. Plans are in progress to introduce the method at the center in Zarrentin. Torsten Winter's team in Laichingen is also preparing to use AGVs for other tasks such as traveling elevators to transport goods from 2nd storage picking processes.

Winter explains: "Our innovative solutions to support the order-pickers and our processes must surely rank among the best in the food retailing sector. The system runs in two shifts from 6 a.m. to 10 p.m, and we have not experienced any serious disruption so far. It's quite simply been great."

Marktkauf Logistik grew out of AVA-Logistik on July 1, 2006. The subsidiary of Marktkauf Holding which in turn is a 100% owned subsidiary of the Edeka Group, boasts three state-of-the-art logistics centers in Bielefeld, Laichingen and Zarrentin, each about 50,000 m² in size, from where goods are distributed to branches of Marktkauf throughout Germany. Marktkauf Logistik, which has a workforce of about 760 employees, achieved sales of around EUR 1.4 bn in 2005.

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