Unique interaction:
mobile robots set new standards.

Prodrive Technologies B.V. is growing steadily. To cope with an annual growth of around 25 per cent, the company decided to build a brand new distribution centre at Son in the Netherlands. The intralogistics were supplied by Jungheinrich AG, who implemented a highly automated warehouse concept. Prodrive Technologies is the first company in the world to use Jungheinrich's autonomous mobile robots for underload transport working interactively with automated narrow-aisle trucks. A winning combination.

AFFORDABLE, SCALABLE AND FLEXIBLE.

The warehouse concept realised by Jungheinrich guarantees high productivity and a high degree of flexibility. Furthermore, the solution is scalable, and the concept allows it to grow with the customer. At the heart of the innovative intralogistics solution is a combination of 15 arculee S autonomous mobile robots (AMR) and 8 EKX 516ka mobile robots for automated VNA storage (AGV). This combination can handle the wide variety of goods seamlessly, whilst keeping the investment in the 12-metre-high compartmentalised high-bay warehouses affordable.

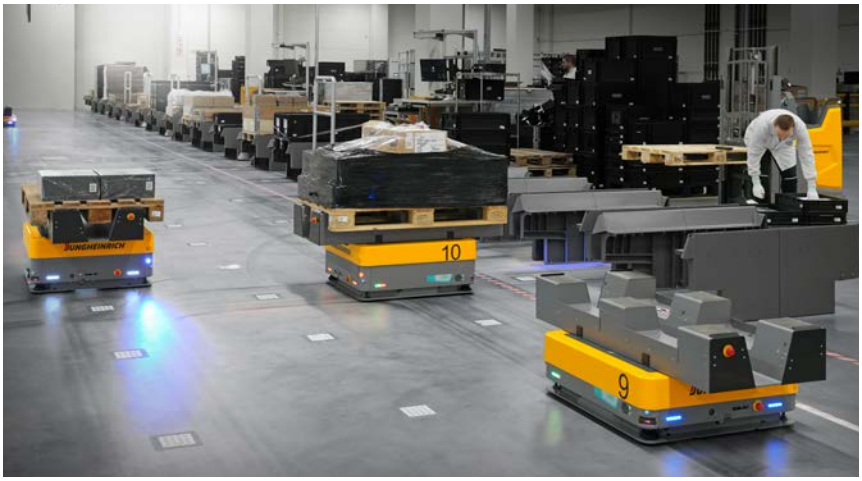
The new intralogistics concept provides the required flexibility, scalability and productivity.

MAXIMISED PRODUCTIVITY.

Incoming pallets are placed on a conveyor where the pallet shape and quality are checked. An arculee S then picks up the pallet and transports it to the high-bay warehouse. There, an automated VNA truck EKX 516ka stores the goods. Outgoing pallets are transported by the AMR to one of six picking stations, each equipped with six pick-up/drop-off points. To maximise productivity, the high-bay warehouse is fenced off from employees. Although the autonomous mobile robots arculee S operate safely and smoothly in an environment with other trucks and people, the decision was made to minimise human-robot interaction, thereby maximising productivity. The system has a theoretical picking capacity of 80 pallets per hour. The theoretical capacity for the high bay is also 80 pallets per hour.

HIGHER QUALITY.

The new intralogistics concept provides the required flexibility, scalability and productivity. The mobile robots are available 24/7. In addition, the quality of the processes has improved significantly. Damage to both goods and equipment has been significantly reduced. As a result, Prodrive Technologies will save a considerable 10 per cent in repair costs every year. In addition, the new concept provides visibility and control, and products are no longer lost.



360° safety sensor technology for safe applications in the man-machine environment.

THE PROJECT AT A GLANCE

Customer:	Prodrive Technologies B.V.
Sector:	High-tech manufacturing
Company size:	2,500 employees
Location:	Son, the Netherlands
Warehouse size:	20,000 m²

CHALLENGE

Implement an overall intralogistics concept with largely automated processes for the newly built logistics warehouse.

JUNGHEINRICH SOLUTION

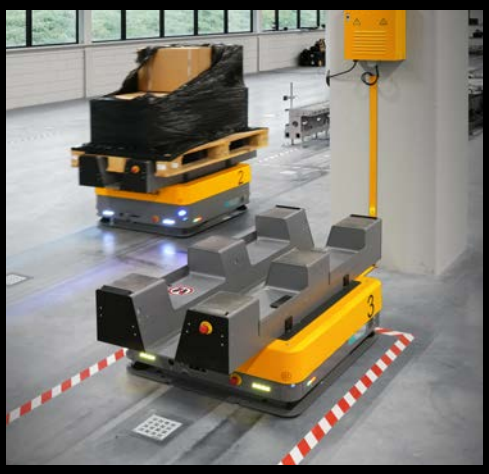
A unique interaction between arculee S autonomous mobile robots for underload transport and EKX 516ka automated VNA trucks, coordinated and controlled by Jungheinrich Logistics Interface and the warehouse control system Jungheinrich WCS

RESULTS

A flexible and scalable concept that guarantees higher productivity and continuous operation. Process quality is also significantly improved.

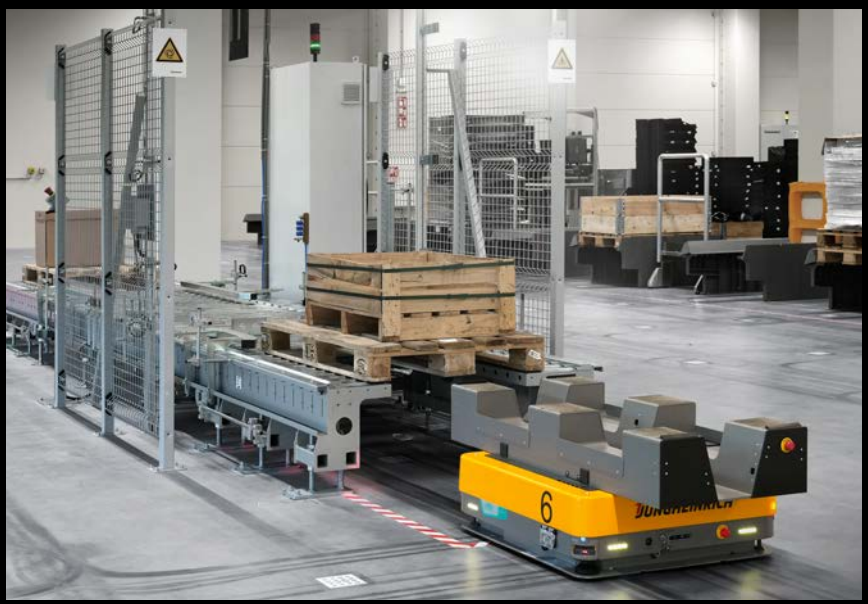
IMPRESSIONS

The arcuee S automatically recharges its lithium-ion batteries when needed, keeping them ready for use around the clock.



Efficient, scalable and flexible.
At the heart of this innovative intralogistics solution is the unique combination of 15 autonomous mobile robots arculee S and 8 EKX 516ka mobile robots for automated VNA storage.

After each order picking, the contours of the pallets are checked before they are stored in the high-bay warehouse.



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