KUKA

KMP 1500P

KMP 1500P. The smart AMR platform maximizes efficiency in production halls and warehouses.

The autonomous mobile platform, is designed to enhance intralogistics, material supply for production lines and process linkage applications. With its cutting-edge slam navigation, precision positioning, advanced load identification, 3D cameras, and innovative charging technology, this AMR offers a package of high-performance features, safety, and flexibility in automated transport and material handling.

The autonomous mobile robot (AMR) is a game-changing solution to optimize intralogistics operation. The KMP 1500 lifts all types of load carriers and could be easily implemented into existing industrial projects to deliver exceptional solutions, whether it is optimizing warehouse processes, streamlining assembly lines, or enhancing material handling in complex industrial environments.

The AMR platform can identify the load due to its technology and QR code readers, which improves material traceability and operational efficiency. In addition, the 3D cameras provide an additional layer of safety, detecting obstacles in three-dimensional space, and ensuring the well-being of the AMR, the load and equipment.

The KMP 1500P offers easy programming that allows workflows to be quickly adapted and optimized, reducing the time and resources required for implementation, and resulting in increased operational efficiency and flexibility.

The driverless transport system is the perfect solution for automating material supply. Small and medium-sized companies also benefit from lower operating costs and a high degree of flexibility when using mobile robotics.

Versatile use of driverless robotics in intralogistics

The AMR automatically delivers the required goods and raw materials to the right place at the right time. The Autonomous Mobile Robot (AMR), with its differential drive technology, is optimally equipped for tasks in production and in-plant logistics. A wide range of applications can be supported.

- **Material supply to stations and lines.** Enables efficient just in time material supply from the warehouse or supermarket to stations, assembly and pre-assembly lines.

- **Process linkage/chaining.** Autonomous transport of components and workpieces from station to station by the KMP 1500P increases the flexibility in the production and makes unflexible conveyers obsolete.

- **Commissioning.** Flexible picking processes, goods-to-person, autonomous piece picking or flexible sorting.

- **Warehousing and point-to-point transports.** Reliable stock management and inventory control thanks to the KMP 1500P and its capable fleetmanager KMReS.

Configuring instead of programming – the KMReS navigation system

The No-Code-Platform with AI functionality is easy and intuitive to use. The navigation system KRMeS makes it possible to configure settings by courser in the browser instead of programming them. This allows new or modified routes to be planned quickly and efficiently. Additional comfort and AI functions as automatic rack recognition increase the efficiency during integration.

The software also enables comprehensive fleet management of the entire AMR system. It fully regulates all fleet traffic and is able to automatically reschedule in the event of obstacles.

Smart traffic management for optimized material flow: different AMRs and AMRs on one digital platform.

Demands on mobile robotics in the age of Logistics 4.0

The autonomous mobile platform KMP 1500P provides a safe and autonomous transport solution for heavy loads in factories and logistics centers. With its flexible movement, the KMP 1500P can navigate complex and dynamic environments, adapt to changing requirements and optimize material flow. This provides agility and versatility in operations, ultimately helping businesses to respond quickly to evolving market demands and achieve higher productivity.

The autonomous transport system is characterized by high flexibility, safety and scalability

Autonomous navigation	Highest safety standards	Intelligent charging management	Extras for flexible use	International certification
• Slam-Navigation • Camera underneath the mobile platform, reading QR-codes for high positioning accuracy ±5 mm • Easy to integrate, operate and maintain due to No-Code-Platform with AI functionality KMRes • Connection via Wi-Fi, 5G capable	• Laser scanners for safe obstacle detection • 3D cameras additionally detect obstacles and people, protecting AMR, load and employees • Bumper / safety edge for extra safety • Acoustic and optical signals, as well as 4 emergency stop switches (at each corner of the platform)	• Docking station for conductive charging with digital touch screen • As soon as the battery level gets low, the AMR is automatically routed to a free charging station • No installation of special power supply required due to single phase • 2 h charge for 8 h of use. 1 h charge for 20-80 % capacity • Inductive charging available in 2024	• Lift with treated hole grid pattern (for pins, etc.) • Lifting height: 60 mm • High load capacity up to 1,5 t • Max. speed: 1.8 m/s without load, 1.5 m/s loaded • On-platform camera for QR load identification • Sound module for notifications, alarms, music	• IP 54 protection class: protection against splash water, dust, and chips • ICE, UL, and FCC approval for the IoT devices

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