

# KUKA



KMR iisy



# KMR iisy. Flexibility and reliability combined: the autonomous mobile cobot as the optimal solution for industrial environments.

Autonomous, flexible and with an eye on all obstacles – the KMR iisy is a smart partner in warehouse logistics and production as a fully integrated combination of cobot and transport platform.

The autonomous mobile robot KMR iisy enables the dynamic use of cobot at different workstations and is therefore indispensable as an automation solution. With the HRC-capable KMR iisy, we offer an AMR (Autonomous Mobile Robot) that can move quickly and safely. This is made possible by safety scanners and 3D cameras in combination with cobot LBR iisy. It detects not only humans around the platform with its lidar scanner, but also potential collisions with humans and the cobot LBR iisy. 3D cameras spot obstacles up to two meetwars above the ground.

## Mobile cobots in cleanrooms: efficient automation for demanding environments.

Due to its low particle and emission levels and its ESD certification, the KMR iisy is also suitable for use in cleanrooms. Pick-and-place applications, material transport and palletizing tasks in the semiconductor or electronics industry can be carried out more efficiently and cost-effectively.

**Design and intelligent technology of AMR: ideal for collaborative operation in assembly, intralogistics and as a service robot system.** Due to its adaptability, high flexibility and free navigation, the KMR iisy can be used in the warehouse or as a workpiece carrier.

## Get more out of Industry 4.0 with the use of mobile cobot platforms

Safe collaboration between humans and robotics, automation of more complex, physically demanding tasks for humans, flexible travel paths, collision protection and uninterrupted operation – the autonomous mobile cobot KMR iisy offers numerous advantages for loading and unloading, quality testing in the production line as well as workpiece and material transport. It enables companies to design processes more cost-effectively and efficiently than before.



## Demands on our autonomous mobile cobot

**Flexible and cost effective transportation.** The mobile KMR iisy Cobot links any number of stations in the desired sequence, without the limitations of conventional material transport solutions. This allows smaller batches and different products to be produced in parallel, enabling rapid response to changing customer requirements. Additionally, the AMR allows switching between products fast and less costly, resulting in the ability to deliver small batches with competitive pricing.

**Smart operation.** Both the cobot and the mobile platform are controlled by a single teach pendant, smartPAD pro. This is integrated into the platform and acts as a status display. Decoupling the smartPad pro is therefore not required, preventing misplacement and ensuring direct access if needed. There is no need for an additional control pannel.

**Autonomous navigation.** Free navigation via Slam ensures that the robot can drive autonomously and stop in front of unforeseen obstacles. QR codes can be used to increase the positioning accuracy in workstations.

**High safety.** The collaborative AMR is equipped with safety components. Sensors, safety scanners and 3D cameras detect workers and obstacles up to 2 m above the ground. A high level of collision protection is guaranteed.

**Predictability.** KMR iisy documents its tasks automatically and on-the-fly and constantly transmits its coordinates, so the status and location of the load is known at any time. This increases the material traceability, prevents failures in the material supply.

**24/7 operation.** The AMR platform can be used in 24/7 operation thanks to its inductive charging pads. The lithium-ion battery can be charged in a charging station as well as in workstation during the process.

**Easy maintenance.** Maintenance on the KMR iisy is quick and easy. The platform components are easily accessible via the large access hatches on both broad sides. A control cabinet provides space for additional customer-specific applications.

**Protected construction.** IP 54 protection makes the KRM iisy a reliable AMR solution in demanding environments. Clean room class 3 and ESD protection to ISO 61340-5-1 and ANSI ESD S20.20 further qualify it for sensitive workspaces.

## Designed to work dynamically.

- Load capacity cobot: 11 kg or 15 kg
- Mobile platform capacity: up to 200 kg
- Size of platform area: 695 × 850 mm
- Max. speed: 1,5 m/s
- Precise positioning using QR code technology in workstations

## International certification

- ICE, UL, and FCC approval for the IoT devices
- TÜV Saar tested MRK system (robotics, grippers)



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