ER-FLEX

Automation within reach

ENABLED ROBOTICS

MiR Mobile Cobot ER-Flex

Fahrerloses Transportsystem mit Cobot

Die wichtigsten Merkmale

- Kompatibel mit MiR250 und Aufbau UR5, UR10 oder UR16
- Integriertes Bildverarbeitungssystem
- Statuslicht-Anzeigesystem für kompletten Roboter
- Integriertes Sicherheits-/Not-Halt-System für kompletten Roboter
- Befestigungsplatte mit M6-Gewinde zur Befestigung von Zubehör
- Modular und flexibel: einfach an Ihre Anwendung anpassbar

Beschreibung

Der Mobile Cobot ER-FLEX unterstützt Unternehmen bei der Automatisierung innerbetrieblicher Logistikprozesse. Durch die integrierte Software zur Entwicklung intelligenter Anwendungen können Unternehmen den ER-FLEX für viele verschiedene Aufgaben einsetzen, wie zum Beispiel:

- Maschinenbeladung in einer Schleifensequenz (24/7-365), um Ausfallzeiten zu reduzieren;
- Transport und Handhabung von Materialien, um die Belastung durch sich wiederholende Aufgaben zu verringern und die Rückverfolgbarkeit zu gewährleisten; und
- Auffüllen von Vorräten, damit die Mitarbeiter sich anspruchsvolleren Aufgaben widmen können.

Der ER-FLEX löst nicht nur den Arbeitskräftemangel und senkt die Automatisierungskosten für Unternehmen jeder Größe, sondern ermöglicht auch einen schnellen und einfachen Wechsel zwischen den Funktionen, so dass Benutzer ohne Programmiererfahrung den Roboter in wenigen Minuten einsetzen können.

Looking for a way to optimize internal logistics, improve traceability and documentation and secure a stable and continuous workflow?

Finding it hard to secure stable labor to attend to repetitive tasks with precision and consistency?

The ER-FLEX combines mobility and handling in one robot - all connected in one user-friendly and responsive interface.

By introducing the ER-FLEX to your production or lab, you'll gain a robot - or even a fleet of robots - that runs steadily for up to 20 hours a day and performs tasks with millimeter precision. Furthermore, it allows for communication with your ERP, WES, MES or WMS systems, production machines, doors and elevators.

This is a robot, designed to navigate in an industrial environment and to collaborate with human co-workers. It can set up a site map of the location in a few minutes, is easily programmable and solves specific tasks prompted by your in-house logistics system. If the environment or tasks change, it's easy to add new tasks and routes.

GO FOR IT !

PICK N' PLACE
If you have a production workflow where items need to be moved from one place or station to another regularly, the ER-FLEX delivers a perfect solution for that. Easy to set up and adjust to new tasks. Visual calibration to markers ensures millimeter precision on every pick.
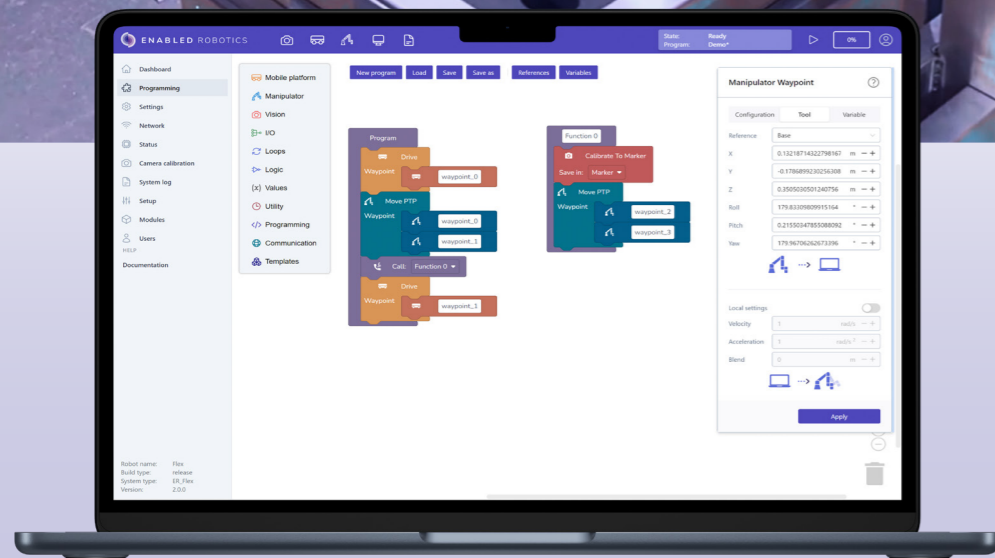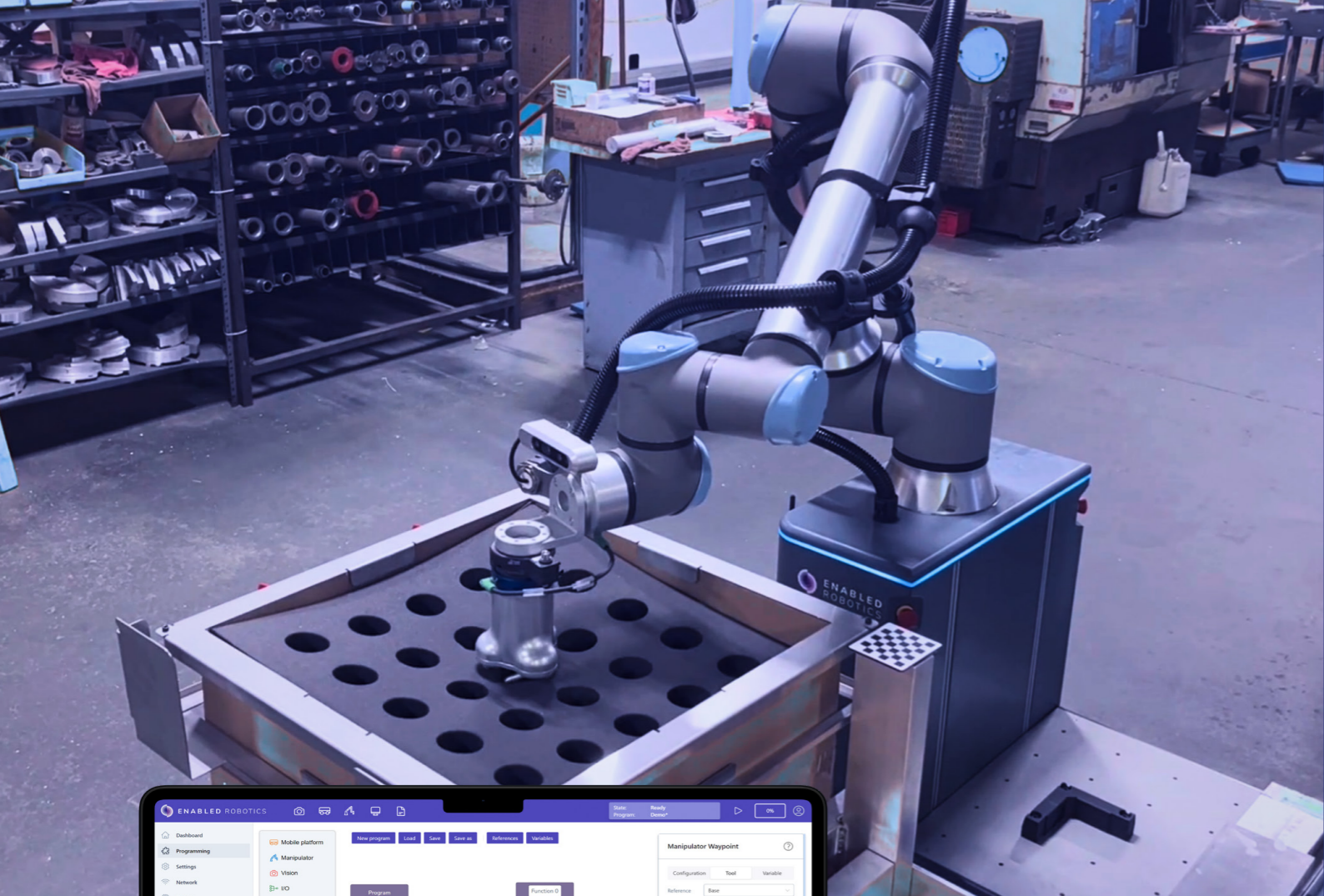
MACHINE TENDING
The ER-FLEX can work alongside and communicate with both human co-workers and machines. Make the robot pick an item from a rack, go to the machine, place the item in the machine, take it out and repeat the operation in a continuous loop. With a smart production layout and smart charging, you can even make it run 24/7.

INSPECTION & DOCUMENTATION
The stability of the ER-FLEX makes it very applicable for inspection, documentation and quality control - and better than humans for many tasks. It doesn't forget, and it needs no breaks. The log of the software collects all data from the robot. You just have to define which data is relevant to you.

LINESIDE DELIVERY
To ensure a steady workflow on a production line you need continuous replenishment of parts and items. The ER-FLEX communicates with your in-house ERP, WMS or other systems and you can set up your system or machines to call for the robot whenever a box is empty or full to be picked up or replenished.
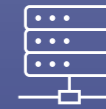
MOVING TOWARDS FULL ROBOT AUTONOMY ON SITE

Did you know that the ER-FLEX robot can communicate with your internal logistics systems, doors and machines for full automation of workflows and excellent documentation and traceability? Get to know some of the cool features:

SITE LAYOUT MANAGER
Adds 3D coordinates to the automatically scanned 2D site map. Manually teach the robot - or define with coordinates - where items and machines are placed. The robot creates a 3D representation of all the defined items.

CARGO MANAGER
Keeps track of the location of defined items at all times and lets you control onboard racks and shelves automatically. All you have to do is define pick and place routines for your racks and the robot will take care of the rest.

COMMUNICATION
The ER-FLEX can communicate with machines, electrical doors, elevators and other systems through OPC UA or REST. It also exposes a REST API for communication with your in-house ERP, WES, MES or WMS systems.

CHECK VOLUME
To prevent downtime you can let the robot check availability before placing an item. If the space is occupied you can program the robot to autonomously identify an alternative placement.

TRACEABILITY
Every move, pick or task performed by the robot is tracked and logged. Placing barcodes and QR codes on shelves, boxes or machines will let you know the exact time and place of e.g. delivery, pick or quality control. If visual documentation is needed, the camera can take a photo for documentation purposes.
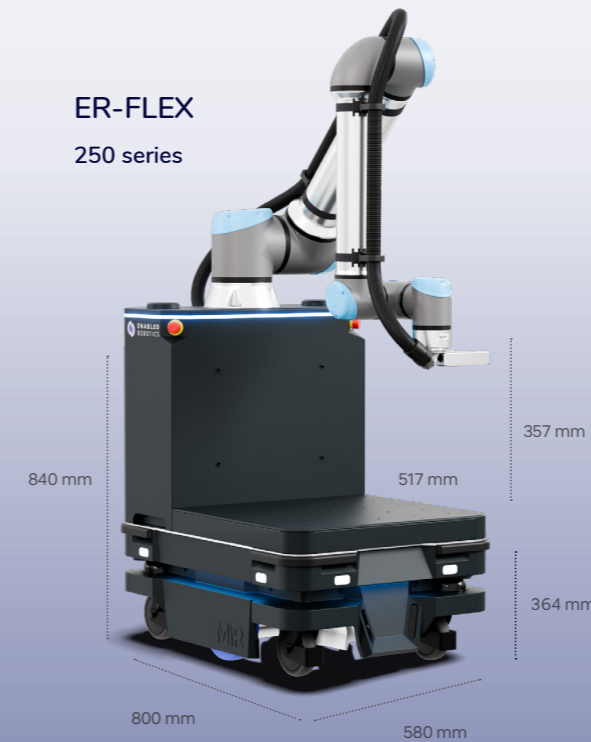
PRECISION
When utilizing mobile units in large spaces some degree of inherent imprecision is expected during movement. To adjust for that, the ER-FLEX has an ultra-precise camera and uses markers to calibrate the position before performing a task with the robot arm. This ensures a precision within 1 mm for every task!

EASY PROGRAMMING, PRECISION AND TRACEABILITY

The ER-FLEX is easy to set up and the integrated vision system ensures precision on every task. The intuitive drag-and-drop programming and responsive design of the interface will get you up and running fast. With a little training, you can utilize all the smart features and have a stabile workflow running in your production, lab or warehouse.

FLEXIBLE CONFIGURATION

SPECIFICATIONS

ER-FLEX

250 series

357 mm

840 mm   517 mm

364 mm

800 mm   580 mm

Weight	161 - 174 kg
Arm options	UR5e / UR10e / UR16e
Arm payload	UR5e: 5 kg / UR10e: 12.5 kg / UR16e: 16 kg
Payload	Up to 186 kg
Operating time	4.5 hours - 100% to 10%
Charge time	40 minutes- 20% to 80%
Daily utilization	Up to 20 hours (24 hours with smart layout)
Communication	Dual-band wireless (b/g/n/ac)
Environment	5-40°C IP20 (humidity 10-95% non-condensing)
Precision	Within 1 mm
Max speed	2.0 m/s

TRAINING

Basic programming of ER-FLEX is easy. But to realize the full potential of the robot and to ensure a smooth and stable workflow, we always recommend our ER-ACADEMY training courses. Please contact us for more info.

CORE
Gain knowledge and practical programming experience with the ER-FLEX robot. The course prepares you for setting up basic applications with the robot.

SPECIALIST
Learn advanced programming features, vision functions, and how to set up communication interfaces to integrate the robot with external systems.

CUSTOMIZED
Need a training course specifically related to your application or integration? Contact us and we can tailor-make a course based on your needs.

ROBOT SAFETY

FULL STOP MEASURES
· Proximity sensors scan the floor surrounding the robot
· Laser sensors detect objects from afar
· Cameras detect objects higher than 40 cm in front of the robot
· Force sensors stop the arm if it senses counterpressure
· Virtual 3D safety planes can be defined for the robot to work within
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COMMUNICATION MEASURES:
· LED status lights in different colors communicate the current status of both the robot arm and mobile unit

PAYLOAD MEASURES:
· The payload zone chart advises max arm payload within specific zones of the robot

HARD TO DECIDE?

Buying robots for a production or lab site is a serious decision with many factors to consider. That's why we offer test studies so you can build your decision upon tested and solid grounds.

FEASIBILITY STUDY

We set up the robot for a mock-up test application at our test lab, or at your location to show how and if the robot can solve the specific task(s) that you need solved.

PROOF OF CONCEPT

A more in-depth study at our lab where we build a full-scale mock-up of specific parts of your production or lab site. We also retrieve test data and strive to optimize e.g. cycle time.

Watch video
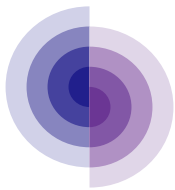
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