



# ER-FLEX

Automation within reach



ENABLED ROBOTICS



# GO FOR IT !

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 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 run steadily for up to 20 hours a day and perform 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 easy 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.

## PICK N' PLACE

If you have a production workflow where items need to be moved from one place or station to another on a regular basis, the ER-FLEX delivers a perfect solution for that. Easy to set up and adjust to new tasks. Visual calibration to markers ensure millimeter precision on every pick.

## MACHINE TENDING

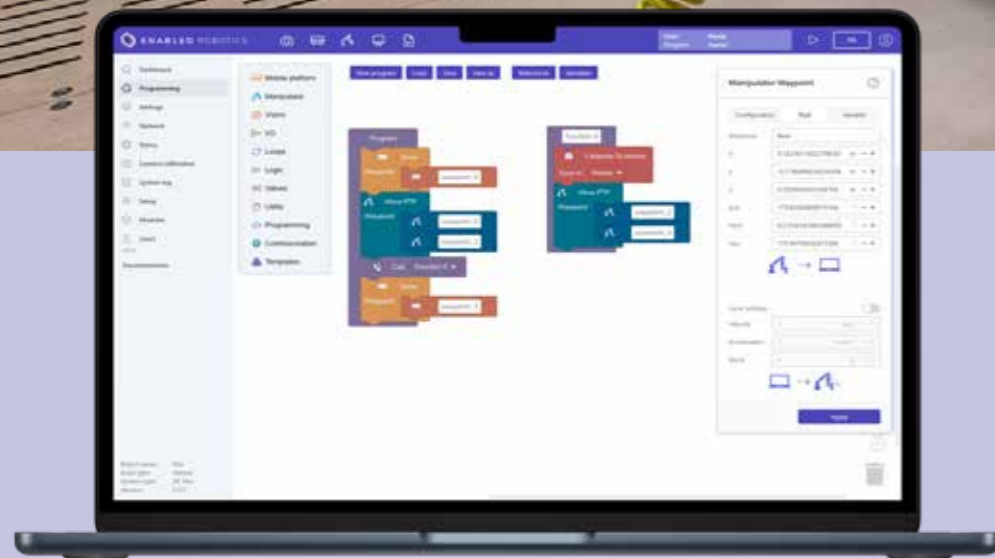
The ER-FLEX can work alongside and communicate with both human co-workers and machines. Make the robot pick an item from a rack, go to the machine and place the item in the machine, take it out and repeat operation in a continuous loop.

## INSPECTION & DOCUMENTATION

The stability of the ER-FLEX makes it very applicable for inspection, documentation and quality control - better than humans for many tasks. It doesn't forget tasks, and it runs for up to 20 hours without breaks. The log of the software collects all data from the robot. You just have to define which data is relevant to you.

## REPLENISHMENT

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.



## 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 n' drop programming and responsive design of the interface will get you up and running fast. And with a little training you can utilize all the smart features and have a stable workflow running in your production, lab or warehouse.

## 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 inventory 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 of e.g. delivery, pick or quality control. If visual documentation is needed, the camera can record or take a photo for the documentation log.



### 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 use markers to calibrate the position before performing a task with the robot arm. This ensures a precision within 1 mm for every task!

# CONFIGURE YOUR ER-FLEX IN 3 STEPS

# SPECIFICATIONS

**1**

Choose your mobile platform



MiR250  
MiR250 ESD  
High base (optional)

**2**

Choose your robot arm



UR16e  
UR10e  
UR5e

**3**

Choose application kit



ER-Tool, customized to your needs  
Existing tools/grippers from UR+ eco-system  
Contact Enabled Robotics for existing application kits (grippers, tools, front module)



Weight	147 - 165 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
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 realise the full potential of the robot and to ensure a smooth and stable workflow, we always recommend our ER-ACADEMY training modules. 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:

- UV-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 counter pressure

### Communication measures:

- LED status lights in different colors communicate the current status of both the robot arm and mobile unit

### Payload measures:

- Payload zone chart advise max arm payload within specific zones of the robot



# HARD TO DECIDE?

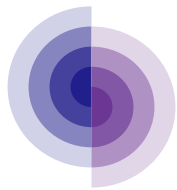
Buying robots for a production or lab site is a serious decision with many factors to consider. That's why we offer test studies so you can build your decision upon tested and solid grounds.

## 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 own 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.



# ENABLED ROBOTICS

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