MiR

MOBILE INDUSTRIAL ROBOTS

A better way

Do logistics in a better way

Want to optimize your productivity, internal workflows and increase your competitiveness? Bring your internal logistics up to speed with autonomous mobile robots that automate repetitive and injury-prone material transportation and work safely alongside your employees to boost productivity.

MiR's collaborative mobile robots are simple to integrate and easy to program, with no need for expensive and disruptive reconfiguration of your infrastructure. You'll see an immediate impact on your ability to process orders faster and reduce material handling costs to get fast ROI on your mobile robots – often, in less than 12 months.

Need flexibility? User-friendly MiR robots enable you to adapt to changing market demands, new products, and new production flows. Very easily, you can switch out top modules, change missions, and add new functionality, without the need for external integration services.

See how companies from different industries around the world – and from family-owned regional businesses to global companies with multiple locations – have found a better way to do logistics with MiR. With local sales offices around the world and a global distribution network, we are ready to support your business wherever you are located.

MiR | a better way

MiR250

Flexibility

An open interface supports different applications

Anchoring Devices

Robot arms

Disinfection

Communication

Safety units

Stations

Lifts

And more...
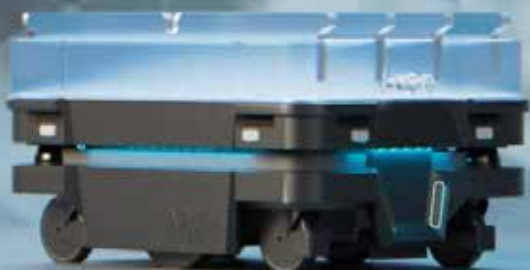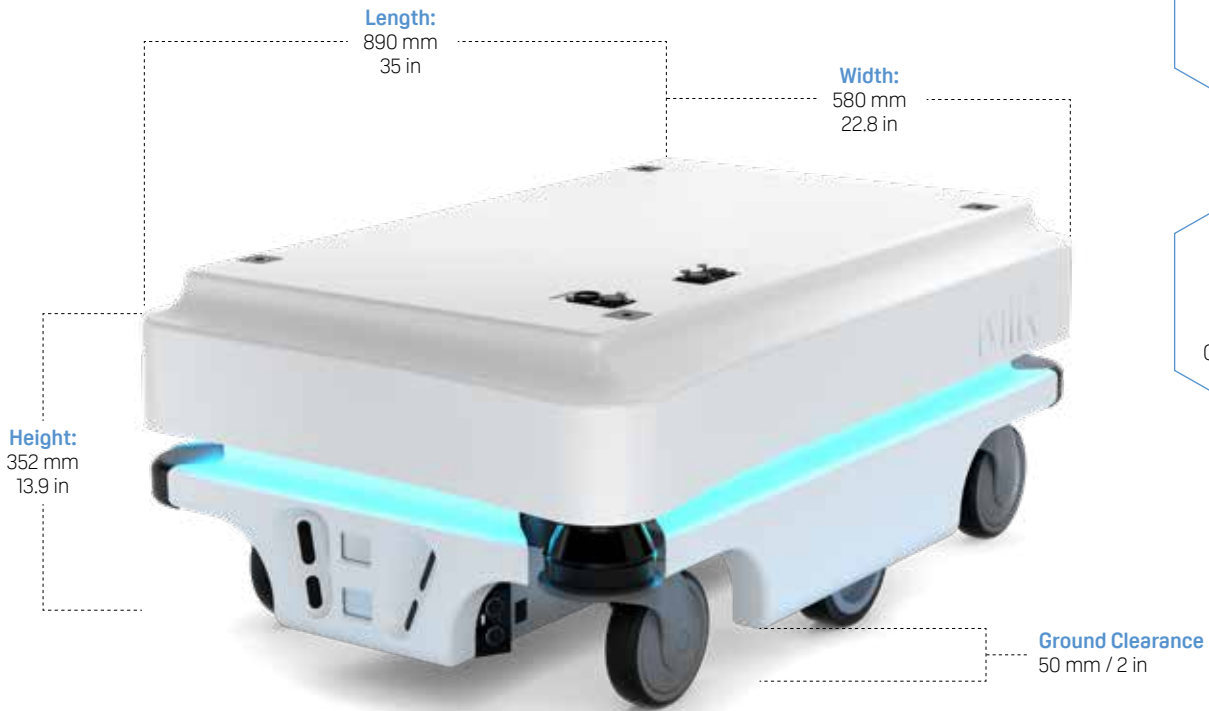
Frame/Shelves

Fleet

Conveyors

MiRGo

The MiR robots are flexible platforms, ready for your application to be integrated. With MiRGo, we present different available third party applications for your inspiration.

Check it out, maybe there's just the accessory you need in order to optimize your internal logistics.

Visit MiRGo:
mir-robots.com/mirgo

MiR100

Length:
890 mm
35 in

Width:
580 mm
22.8 in

Height:
352 mm
13.9 in

Load weight:
100 kg / 220 lbs

Certifications:
Clean Room Certified

Ground Clearance
50 mm / 2 in

Safe and cost-effective mobile robots

The **MiR100** and **MiR200** are safe, cost-effective mobile robots that quickly automate your internal transportation and logistics of smaller parts. The robots optimize workflows, freeing staff resources so you can increase productivity and reduce costs. The highly flexible mobile robots autonomously transport up to 200 kg (440 lbs). They can be mounted with customized top modules such as bins, racks, lifts, conveyors or even a collaborative robot arm – whatever your application demands. Top modules are easy to change so the robot can be redeployed for different tasks.

MiR Charge 24V

A fully automatic charging solution

The MiR100 and the MiR200 move and connect autonomously to the charging station.

Width:
580 mm / 23 in

Height:
300 mm
11.8 in

Depth:
120 mm / 4.7 in

DEWALT Stanley Black & Decker

MiR200 robots are used as mobile workbenches that connect the assembly lines and robotic cells at DEWALT Stanley Black & Decker. The MiR200s are part of a fully automated process where they transport pallets of 180 kg, and free up workers for more valuable tasks in the production.

180
kg

FORD

Ford implemented 3 **MiR100**. With a payload of 100 kg. each, they deliver spare parts to Ford's manufacturing plant, often in a hostile environment. The mobile robots avoid unforeseen obstacles, can modify their route or stop when necessary, and they work safely alongside people and other vehicles in the 300,000m² plant.

3
MiR100

MiR250

Width:
580 mm
22.8 in

Length:
800 mm
31.4 in

Height:
300 mm
11.8 in

Exceed expectations with MiR250

The **MiR250** sets new standards for internal logistics with a robot that is faster, safer and more agile than any other solution in the same category on the market.

The innovative **MiR250** is packed with the newest technology, designed for serviceability and it can navigate smoothly and efficiently in dynamic environments.

Increased agility with MiR250 Dynamic
MiR250 Dynamic is another version of MiR250 with the possibility to modify settings that enables it to drive closer to objects. Subject to risk assessment, the MiR250 Dynamic can typically be used for driving in narrow corridors, doors and other spaces.

Payload:
250 kg / 551 lbs

ESD version:
Optional
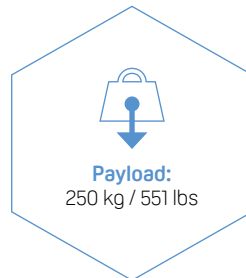
MiR Shelf Carrier
Streamline your logistics

Together with the **MiR250**, we have developed a standard top module: The Shelf Carrier.

The Shelf Carrier is an anchoring device, which enables the robot to collect and deliver carts, shelves or similar, and is available directly from MiR.

Visit our webpage to learn more about the MiR250 and Shelf Carrier at: mir-robots.com/solutions

Towing capacity:
500 kg / 1100 lbs
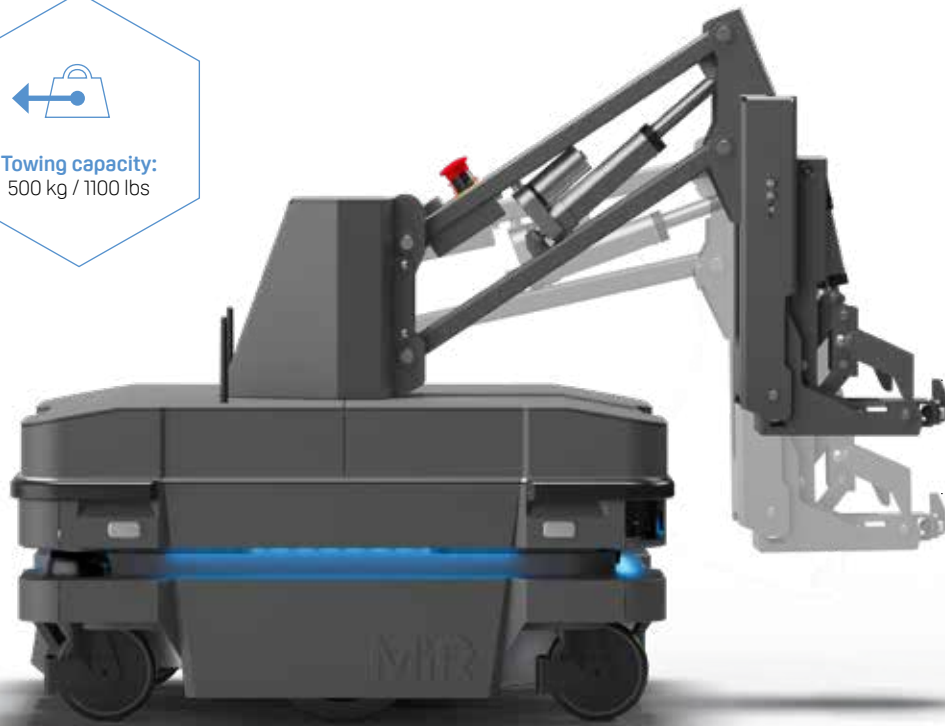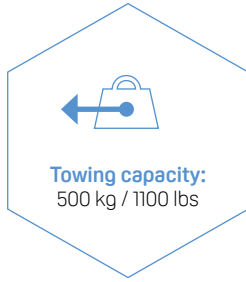
Highest gripping height above floor
350 mm
13.8 in

Lowest gripping height above floor:
80 mm
3.1 in

Automated in-house transport solutions

Autonomously picks up and unloads carts and is ideal for a wide range of towing jobs.

Moves heavy products between locations effectively.

Patented solution from MiR – only AMR in the market with towing functionality.

MiR500

Width:
910 mm
35.8 in

Length:
1350 mm
53.1 in

Height:
322 mm
12.7 in

Load weight:
500 kg / 1100 lbs

Safety:
5 safety rated functions

MiR500 and **MiR1000** can automate and optimize the internal transport of heavy duties and pallets.

MiR500 and MiR1000 can be deployed with pallet lifts from MiR and can pick up, transport and deliver pallets autonomously. This means that the collaborative robots constitute a safe alternative to traditional forklifts and trucks, which many companies would like to remove from manufacturing halls, as they often cause a safety risk.

At the same time, MiR500 and MiR1000 move autonomously, meaning that they do not need to be manned, so they free up employees for more valuable tasks and optimize internal workflows.
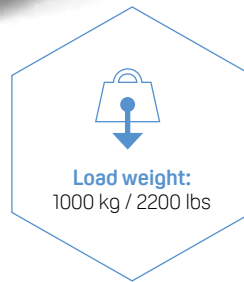
Extremely user-friendly interface

- Works on PC, tablet and smartphone
- Customizable dashboard makes it easy to tailor the interface to the individual user's needs.
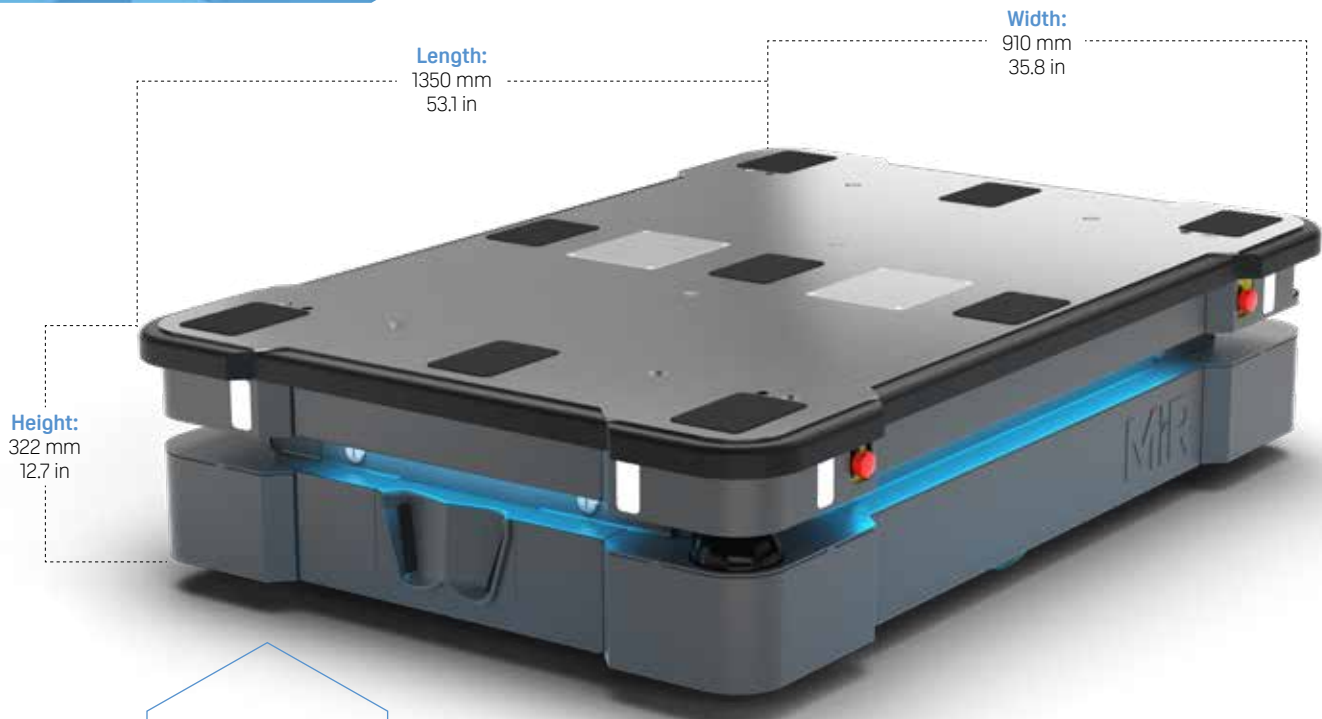
MiR1000

Length:
1350 mm
53.1 in

Width:
910 mm
35.8 in

Height:
322 mm
12.7 in

Load weight:
1000 kg / 2200 lbs

Safety:
5 safety rated functions

MiR Charge 48V

A fully automatic charging solution

The MiR robots move and connect autonomously to the charging station.
MiR250. **MiR500**, **MiR1000**, **MiR600**, and **MiR1350** use the **MiR Charge 48V**, that is IP52 rated.

Width:
622 mm / 24.49

Depth (folded):
237 mm / 9.33 in

Height:
286 mm
11.26 in

Depth - operational mode:
487 mm / 18.17 in

MiR600

Length:
1350 mm
53.1 in

Width:
910 mm
35.8 in

Height:
322 mm
12.7 in

Rating:
IP52

Load weight:
600 kg / 1320 lbs

Compliance:
ISO-3691-4*

The **MiR600** and **MiR1350** are next generation AMRs that maximize the efficiency of your internal logistics.

The AMRs can pick-up, transport and deliver pallets or other heavy loads automatically even in highly dynamic environments and constitute a safe and efficient alternative to traditional AGVs, pallet lifts, and forklifts.

Industry grade AMRs

The MiR600 and MiR1350 are industry grade robots. The two AMRs have improved chassis and bogie to withstand the high payload. All components are industrial quality and protected, and easily accessible for service via pullout compartments, making the MiR600 and MiR1350 stronger and superior AMRs.

MiR1350

Width:
910 mm
35.8 in

Length:
1350 mm
53.1 in

Height:
322 mm
12.7 in

Rating:
IP52

Load weight:
1350 kg / 2976 lbs

Compliance:
ISO-3691-4*
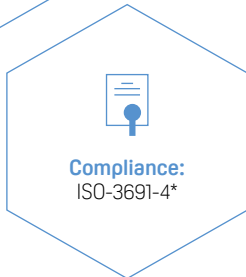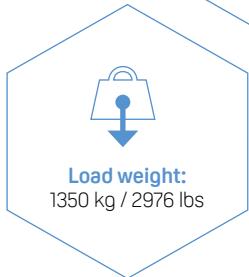
The **MiR600** and **MiR1350** are designed to comply with the highest available safety standards, making them superior to other AMRs. The two robots are the first IP52 rated AMRs in the market. This means that they have the ability to withstand dust particles and waterdrops and can be used in more challenging environments than other AMRs.

*Minor exceptions to ISO 3691-4 are identified and handled via MiRs Safety & Compliance documentation.

Novo Nordisk

Five **MiR500**s improve the warehouse logistics within the Chinese plant of Novo Nordisk by transporting packaging materials from the depot area to the warehouse. The distance is 100 metres per trip with 3 to 4 twists and turns and driving in crowded areas. MiR robots were the obvious solution to take on this task with their autonomous technology, and the robots save Novo Nordisk 35 manhours per week.

35

manhours saved
per week

Florisa

Five **MiR1000**s have improved productivity, safety and eliminated storage problems within the Florisa plant, a company that operates in the textile segment. Previously, the plant used manned forklifts to transport 90 tons of fabric to the production floor every day. MiR's automated solutions have allowed up to 200 tons to be transported per day which represents a 122% increase on what was previously achieved.

200

tons transported
per day

Optimize transportation of heavy loads and pallets with out-of-box solutions from MiR.

MiR Pallet Lift

Applicable for
MiR500, MiR600, MiR1000 and MiR1350

Designed for transport of pallets

MiR EU Pallet Lift

Applicable for
MiR500, MiR600, MiR1000 and MiR1350

Designed for transport of EU pallets
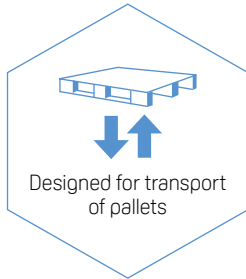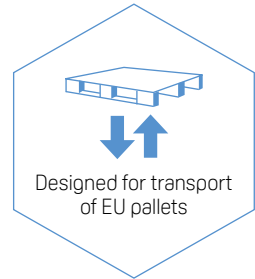
MiR Shelf Lift

Optimize transportation of heavy loads without changing facility layout.

With **MiR Shelf Lift**, the MiR500, MiR600, MiR1000, and MiR1350 can autonomously pick up a cart or shelf, transport and deliver it. This ensures a flexible transportation of heavy loads of different sizes, without the need of a pallet rack.

Applicable for
MiR500, MiR600, MiR1000 and MiR1350

Designed for flexible transportation
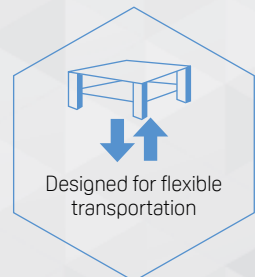
MiR Fleet

Fleet management for optimized robot traffic

- ■ Fast and central configuration of a fleet of robots.
- ■ Prioritization and selection of the robot which is best suited for a job, based on position and availability.
- ■ Planning of the use of different top modules, hook, and other accessories.
- ■ Full featured REST-API for ERP implementation.
- ■ Planning of the use of different types of MiR robots

MiR | Academy

Free online trainings for MiR robots

At MiR, we strive to help you to learn more about autonomous mobile robots (AMRs), how they work and how you can use them.

MiRAcademy makes the technology behind AMRs getable with engaging, online training courses. Are you already working with the MiR robots, or do you just want to learn more? Then MiRAcademy is the place to start!

Learn how a MiR robot navigates, the differences between AMRs and traditional AGVs, what a mobile robot sees and much more.

Visit
www.mobile-industrial-robots.com/miracademy
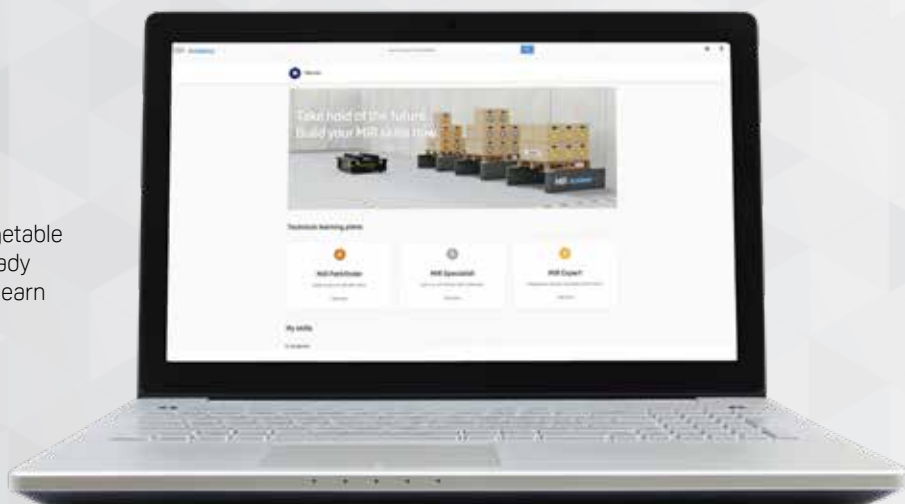
MiR | Service

Optimize uptime and increase productivity of your logistics operations with MiR Service's preventive and reactive services that you can customize for your specific set-up.

Future-proof logistics solutions must fit seamlessly into your operational processes, integrate into your automation systems, be scalable, and adapt flexibly to new workflows and environments. And production delays or downtime due to AMR maintenance or repair is not an option. With MiR Service we ensure that you are prepared for the unexpected with a service concept based on reliability, availability, responsiveness, flexibility, and expertise.
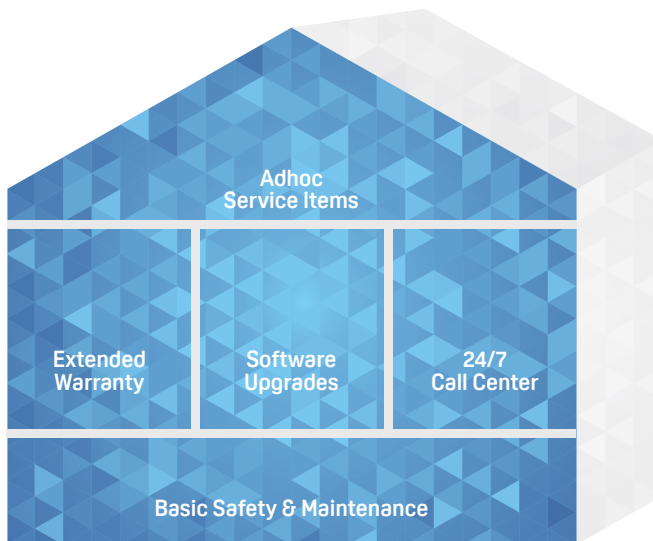

Adhoc Service Items

Extended Warranty

Software Upgrades

24/7 Call Center

Basic Safety & Maintenance

Customize your MiR Service solution

The foundation of our service offering bases on prevention rather than repair. You get maintenance and a basic safety inspection to ensure safety, that you comply with legislation and you get access to our help desk during the warranty period.

We offer extended warranty, access to software upgrades, access to 24/7 call center as standard service offerings, while you also have an opportunity of having ad hoc service items as spare part packages, maintenance kits, training, and more according to your needs.

MiR | Finance

Companies in all types of industries, large and small, are grappling with ways to become more efficient, while at the same time keeping their costs as low as possible.

Automation is a way to optimize productivity and provide a competitive edge. Concerns surrounding ROI speed should not slow automation down. The cost-efficient mobile robots from MiR offer a fast ROI, with a payback period in often less than a year. If you want to see immediate return on investment and have low or no upfront costs for your AMRs, you can lease your MiR robots with MiR Finance.

Benefits

- No cash-out and low monthly costs
- The entire solution, including robot, top module and installation service can be financed
- No CAPEX needed
- Easier internal approval process for OPEX
- Match costs with income stream

Scan this QR Code and get direct access to MiR's **ROI Calculator**

Scan this QR Code, and calculate the hourly and monthly **leasing** cost for robots
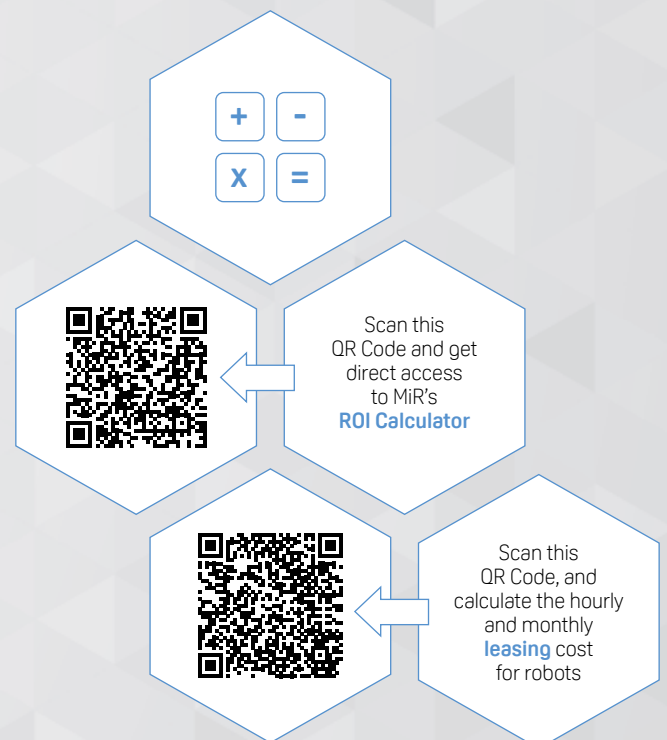
Zealand University Hospital

Five hospital departments at Zealand University Hospital in Denmark receive daily autonomous deliveries from the hospital's sterilization center with a **MiR100**. Before the mobile robot arrived, service assistants were providing weekly deliveries of disposable equipment to hospital departments. A manual procedure that involved heavy lifting.

Now the MiR100 improves the ergonomics, make sure that deliveries are made on time, and frees up time for the service assistants to do warmer tasks like patient care.

5

Departments serviced pr. day

Cabka USA

A **MiR500** equipped with a MiR500 Lift is a key component in a fully automated production line at pallet manufacturer, Cabka in Missouri. The mobile robot for heavy loads and pallets is loaded with finished pallets by a six-axis robot and transports them from production to a separate staging area as soon as the job is complete, keeping the production floor clear.

The MiR500 takes over the internal transportation task from a traditional forklift and helps Cabka minimize dependency on temporary workers while also improving product quality and worker safety.

Fast ROI

MiR100

DESIGNATED USE

Collaborative mobile robot	For smaller transport tasks within the industry, logistics and healthcare

DIMENSIONS

Length	890 mm / 35 in
Width	580 mm / 22.8 in
Height	352 mm / 13.9 in
Ground Clearance	50 mm / 2 in
Weight (without battery and payload)	70 kg / 154 lbs

COLOR

RAL color	RAL 9003 / ATHLONE White

PAYLOAD

Robot payload	100 kg / 220 lbs (maximum 5% incline)

SPEED AND PERFORMANCE

Active operation time	9 hours
Maximum speed	Forwards: 1.5 m/s (5.4 km/h) / 4.9 ft/s (3.6 mph) Backwards: 0.3 m/s (1 km/h) / 1.0 ft/s (0.7 mph)
Traversable gap and sill tolerance	20 mm / 0.8 in

POWER

Battery	Li-NMC, 24 V, 40 Ah
Charging time	With charging station: 10-90 %: 1 hour 10 minutes

ENVIRONMENT

Ambient temperature range	+5°C to 40°C (humidity 10-85% non-condensing)
IP Class	IP20

COMPLIANCE

Compliance and approvals	EMC: EN61000-6-2 and EN61000-6-4 Cleanroom: Class 4 (ISO 14644-1) Safety standards for industrial vehicles: CE, EN1525, ANSI B56.5, RIA15.08, ISO13849-1

COMMUNICATION

WiFi	Dual-band wireless AC/G/N/B
I/Os	USB and Ethernet

SENSORS

SICK safety laser scanners	2 pcs. S300 (front and back) for 360° protection around robot
3D camera	2 pcs. 3D camera Intel RealSense™ Detects objects 50 mm - 1800 mm in height in front of the robot

	MiR250	**MiR250 Dynamic**
DESIGNATED USE		
Collaborative mobile robot	For internal transportation of goods and automation of internal logistics	For internal transportation of goods and automation of internal logistics
DIMENSIONS		
Length	800 mm / 31.5 in	800 mm / 31.5 in
Width	580 mm / 22.8 in	580 mm / 22.8 in
Height	300 mm / 11.8 in	300 mm / 11.8 in
Ground clearance	25 mm / 1.0 in	25 mm / 1.0 in
Weight (without battery and payload)	83 kg / 183 lbs	83 kg / 183 lbs
Load surface	800 x 580 mm / 31.5 x 22.8 in	800 x 580 mm / 31.5 x 22.8 in
COLOR		
RAL color	RAL 7011 / Iron Grey	RAL 7011 / Iron Grey
RAL color - ESD version	RAL 9005 / Jet Black	RAL 9005 / Jet Black
PAYLOAD		
Robot payload	250 kg / 551 lbs (maximum 5% incline)	250 kg / 551 lbs (maximum 5% incline)
SPEED AND PERFORMANCE		
Active operation time with max. payload	13 hours	13 hours
Active operation time without payload	17.4 hours	17.4 hours
Maximum speed	2.0 m/s (7.2 km/h) / 6.6 ft/s (4.5 mph)	2.0 m/s (7.2 km/h) / 6.6 ft/s (4.5 mph)
Positioning accuracy	+/- 20 mm/ 0.8" in of position +/- 3 mm / 0.12" in to VL-marker	+/- 20 mm/ 0.8" in of position +/- 3 mm / 0.12" in to VL-marker
Traversable gap and sill tolerance	0-20 mm / 0-0.8 in	0-20 mm / 0-0.8 in
Operational corridor width	Default: 1550 mm/ 61 in	Min. 850 mm / 32 in
Operational doorway width	Default 1400 mm / 55.1 in	Min. 800 mm / 32 in
POWER		
Battery	Li-NMC, 48 V, 34.2 Ah	Li-NMC, 48 V, 34.2 Ah
Charging ratio	Up to 1:18 (e.g. 20 min charge = 6 hours run time with full load)	Up to 1:18 (e.g. 20 min charge = 6 hours run time with full load)
Number of full charging cycles	Min. 3,000	Min. 3,000
ENVIRONMENT		
Ambient temperature range	+5°C to 40°C (humidity 10-85% non-condensing)	+5°C to 40°C (humidity 10-85% non-condensing)
IP Class	IP21	IP21
COMPLIANCE		
Compliance & approvals	EMC: EN61000-6-2, EN61000-6-4, (EN12895) Safety standards for industrial vehicles: CE, EN1525, ANSI B56.5, ANSI R15.0 ESD: ESD optional	EMC: EN61000-6-2, EN61000-6-4, (EN12895) Safety standards for industrial vehicles: CE, EN1525, ANSI B56.5, ANSI R15.0 ESD: ESD optional
COMMUNICATION		
WiFi	Router: 2.4 GHz 802.11 g/n, 5 GHz 802.11 a/n/ac. Internal computer: 802.11 a/b/g/n/ac	Router: 2.4 GHz 802.11 g/n, 5 GHz 802.11 a/n/ac. Internal computer: 802.11 a/b/g/n/ac
I/Os	4 digital inputs, 4 digital outputs (GPIO), 1 Ethernet port, 1 Auxiliary emergency stop	4 digital inputs, 4 digital outputs (GPIO), 1 Ethernet port, 1 Auxiliary emergency stop
SENSORS		
SICK safety laser scanners	(2 pcs.) SICK NanoScan3 safety system for 360° visual protection around robot	(2 pcs.) SICK NanoScan3 safety system for 360° visual protection around robot
3D camera	(2 pcs.) Intel RealSense D435. FoV: Detects objects 1800 mm high at a distance of 1200 mm in front of the robot. 114° total horizontal view.	(2 pcs.) Intel RealSense D435. FoV: Detects objects 1800 mm high at a distance of 1200 mm in front of the robot. 114° total horizontal view.
Proximity sensors	8 pcs.	8 pcs.

Specifications may vary based on local conditions and application setup.

MiR250 Hook

DESIGNATED USE

Collaborative mobile robot with hook	For fully-automated pick-up and delivery of carts

DIMENSIONS

Gripping height:	80-350 mm (3.15 in - 13.78 in)
Weight (without battery and payload)	188 kg / 414 lbs

COLOR

RAL color	RAL 7011 / Iron Grey

TOWING CAPACITY

Load incl. cart	Up to 500 kg / 1100 lbs at <1 % incline 300 kg / 661 lbs at 5% incline

SPEED AND PERFORMANCE

Active operation time with max. payload	10.25 hours
Maximum speed	2 m/s (7.2 km/hour) / 6.6 ft/s (4.5 mph) with max. payload
Time for placing and picking up a cart	Placing cart: 18 sec. Picking up cart: 48 sec.

POWER

Battery	Li-NMC, 48 V, 34.2 Ah
Charging ratio	Up to 1:12

ENVIRONMENT

Ambient temperature range (humidity 10-85% non-condensing)	+5°C to 40°C
IP class	IP21

COMMUNICATION

WiFi	Router: 2.4 GHz 802.11 g/n, 5 GHz 802.11 a/n/ac. Internal computer: 802.11 a/b/g/n/ac
I/Os	4 digital inputs, 4 digital outputs (GPIO), 1 Ethernet port, 1 Auxiliary emergency stop

SENSORS

SICK safety laser scanners	SICK NanoScan3 safety system (2 pcs.) for 360° visual protection around robot
3D camera (2 pcs.)	2 pcs: Intel RealSense D435. FoV: Detects objects 1800 mm high at a distance of 1200 mm in front of the robot. 114° total horizontal view. Ground view, minimum distance from robot: 250 mm

MiR Shelf Carrier 250

DESIGNATED USE

Top module	The MiR Shelf Carrier is an anchoring device, that makes it possible to lock to shelves and move them

DIMENSIONS

Length	778 mm/ 30.6 in
Width	560 mm / 22 in
Height	77 mm / 3 in
Weight (with robot)	146 kg / 321 lbs
Load surface	800 x 580 mm / 31.5 x 22.8 in

COLOR

RAL color	RAL 9005 / Jet Black

CAPACITY

Carrier capacity	Up to 300 kg / 661 lbs at <1 % incline
Number of lift cycles	Min. 150,000 cycles

	MiR500	**MiR1000**
DESIGNATED USE		
Collaborative mobile robot	For internal transportation of heavy loads and pallets within the industry and logistics	For internal transportation of heavy loads and pallets within the industry and logistics
DIMENSIONS		
Length	1350 mm / 53.1 in	1350 mm / 53.1 in
Width	910 mm / 35.8 in	910 mm / 35.8 in
Height	322 mm / 12.7 in	322 mm / 12.7 in
Ground clearance	40 mm /1.6 in	40 mm / 1.6 in
Weight (without battery and payload)	226 kg / 498 lbs	231 kg / 508 lbs
COLOR		
RAL color	RAL 7011 / Iron Grey	RAL 9005 / Jet Black
PAYLOAD		
Robot payload	500 kg / 1100 lbs	1000 kg / 2200 lbs
SPEED AND PERFORMANCE		
Active operation time without payload.	15 hours	12 hours
Maximum speed	2.0 m/s (7.2 km/h)	1.2 m/s (4.3km/h)
Traversable gap and sill tolerance	20 mm / 0.8 in	20 mm / 0.8 in
POWER		
Battery	Li-NMC, 48 V, 34.2 Ah	Li-NMC, 48 V, 34.2 Ah
Charging time	10%-90%: 1 hour	10%-90%: 1 hour
Number of cycle times	Min. 3,000	Min. 3,000
ENVIRONMENT		
Ambient temperature range	+5°C to 40°C (humidity 10-85% non-condensing)	+5°C to 40°C (humidity 10-85% non-condensing)
IP Class	IP21	IP21
COMPLIANCE		
Compliance & approvals	EMC: EN61000-6-2, EN61000-6-4, (EN12895) Safety standards for industrial vehicles: CE, EN1525, ANSI B56.5, ANSI R15.0 Safety functions: 5 safety functions according to ISO 13849-1	EMC: EN61000-6-2, EN61000-6-4, (EN12895) Safety standards for industrial vehicles: CE, EN1525, ANSI B56.5, ANSI R15.0 Safety functions: 5 safety functions according to ISO 13849-1
COMMUNICATION		
WiFi	Dual-band wireless AC/G/N/B	Dual-band wireless AC/G/N/B
I/Os	4 digital inputs, 4 digital outputs, 1 Ethernet port with Modbus protocol	4 digital inputs, 4 digital outputs, 1 Ethernet port with Modbus protocol
SENSORS		
SICK safety laser scanners (2 pcs.)	MicroScan3 (front and rear) for 360° visual protection around robot	MicroScan3 (front and rear) for 360° visual protection around robot
3D camera (2 pcs.)	2 psc.: Intel RealSense D435. FoV: Detects objects 1700 mm high at a distance of 950 mm in front of the robot. 114° total horizontal view. Ground view, minimum distance from robot: 250 mm	2 psc.: Intel RealSense D435. FoV: Detects objects 1700 mm high at a distance of 950 mm in front of the robot. 114° total horizontal view. Ground view, minimum distance from robot: 250 mm
Proximity sensors	8 pcs	8 pcs

Specifications may vary based on local conditions and application setup.

	MiR600	**MiR1350**
DESIGNATED USE		
Collaborative mobile robot	For internal transportation of heavy loads and pallets within the industry and logistics	For internal transportation of heavy loads and pallets within the industry and logistics
DIMENSIONS		
Length	1350 mm / 53.1 in	1350 mm / 53.1 in
Width	910 mm / 35.8 in	910 mm / 35.8 in
Height	322 mm / 12.7 in	322 mm / 12.7 in
Clearance from ground	30 mm / 1.2 in	30 mm / 1.2 in
Weight (without load)	229 kg / 504 lbs	233 kg / 513 lbs
Load surface	1300 x 900 mm / 51.2 x 35.4 in	1300 x 900 mm / 51.2 x 35.4 in
COLOR		
RAL color	RAL 7011 / Iron Grey	RAL 9005 / Jet Black
PAYLOAD		
Robot payload	600 kg / 1322 lbs	1350 kg / 2976 lbs
SPEED AND PERFORMANCE		
Active operation time with max. payload.	8.33 hours	6.75 hours
Active operation time without payload.	10.75 hours	9.80 hours
Maximum speed	2.0 m/s (7.2 km/h)	1.2 m/s (4.3km/h)
VL Marker accuracy	Position (center of robot): +/- 2 mm / 0.08 in	Position (center of robot): +/- 2 mm / 0.08 in
Traversable gap and sill tolerance	29 mm / 1.1 in	29 mm / 1.1 in
POWER		
Battery	Li-NMC, 48 V, 34.2 Ah	Li-NMC, 48 V, 34.2 Ah
Charging ratio	Up to 1:12 (e.g. 30 min charge = 5.45 hours run time)	Up to 1:12 (e.g. 30 min charge = 6.15 hours run time)
Cycle times	3,000	3,000
ENVIRONMENT		
Ambient temperature range	+5°C to 40°C (humidity 10-85% non-condensing)	+5°C to 40°C (humidity 10-85% non-condensing)
IP Class	IP52	IP52
COMPLIANCE		
Compliance & approvals	EMC: EN61000-6-2, EN61000-6-4, (EN12895) Safety standards for industrial vehicles: CE, EN1525, ANSI B56.5, ISO3691-4, RIA15.08, ISO13849-1	EMC: EN61000-6-2, EN61000-6-4, (EN12895) Safety standards for industrial vehicles: CE, EN1525, ANSI B56.5, ISO3691-4, RIA15.08, ISO13849-1
	Safety functions: 12 safety functions according to ISO3691-4	Safety functions: 12 safety functions according to ISO3691-4
COMMUNICATION		
WiFi	Dual-band wireless AC/G/N/B	Dual-band wireless AC/G/N/B
I/Os	4 digital inputs, 4 digital outputs, 1 Ethernet port with Modbus protocol	4 digital inputs, 4 digital outputs, 1 Ethernet port with Modbus protocol
SENSORS		
SICK safety laser scanners	2 pcs microScan3 (front and rear) for 360° visual protection around robot	2 pcs microScan3 (front and rear) for 360° visual protection around robot
3D camera (2 pcs.)	Intel RealSense D435. FoV: Detects objects 1800 mm high at a distance of 1200 mm in front of the robot. 114° total horizontal view. Ground view, minimum distance from robot: 250 mm	Intel RealSense D435. FoV: Detects objects 1800 mm high at a distance of 1200 mm in front of the robot. 114° total horizontal view. Ground view, minimum distance from robot: 250 mm
Proximity sensors	8 pcs	8 pcs

	MiR Pallet Lift	**MiR** EU Pallet Lift	**MiR** Shelf Lift
DESIGNATED USE			
Lifts for MiR500, MiR600, MiR1000, and MiR1350	For autonomous pickup and unloading of pallets of different dimensions	For autonomous pickup and unloading of EUR-pallets	For autonomous pick up and delivery of carts, shelves and other lift applications
DIMENSIONS			
Length	Frame Length: 1304 mm / 51.3 in Lift Length: 1174 mm / 46.2 in	1200 mm / 47.2 in	Frame Length: 1304 mm / 51.3 in Lift Length: 1174 mm / 46.2 in
Width	Frame Width: 910 mm / 35.8 in Lift Width: 710 mm / 28 in	162 mm / 6.4 in	Frame Width: 910 mm / 35.8 in Lift Width: 710 mm / 28 in
Total height when lowered	94 mm / 3.7 in	87 mm / 3.4 in	94 mm / 3.7 in
Total height when lifted	156 mm / 6.1 in	150 mm / 5.9 in	156 mm / 6.1 in
COLOR			
RAL color for MiR500 and MiR600 lifts	RAL 7011 / Iron Grey	RAL 9005 / Jet Black	RAL 9005 / Jet Black
RAL color for MiR1000 and MiR1350 lifts	RAL 9005 / Jet Black	RAL 9005 / Jet Black	RAL 9005 / Jet Black
PAYLOAD			
Lift payload for MiR500	500 kg / 1100 lbs	500 kg / 1100 lbs	1000 kg / 2200 lbs* *The limitations of the robot's payload should be considered
Lift payload for MiR600	500 kg / 1100 lbs	500 kg / 1100 lbs	500 kg / 1100 lbs
Lift payload for MiR1000	1000 kg / 2200 lbs	1000 kg / 2200 lbs	1000 kg / 2200 lbs
Lift payload for MiR1350	1250 kg / 2755 lbs	1250 kg / 2755 lbs	1250 kg / 2755 lbs
PERFORMANCE			
Lift height	60 mm / 2.4 in	60 mm / 2.4 in	60 mm / 2.4 in
Lifting cycle	Minimum 50,000 cycles for lifts for MiR500/1000 Minimum 90,000 cycles for lifts for MiR600/1350	Minimum 60,000 cycles for lifts for MiR500/1000 Minimum 90,000 cycles for lifts for MiR600/1350	Minimum 50,000 cycles for shelf lift for MiR500/1000 Minimum 90,000 cycles for shelf for MiR600/1350
PALLETS			
Length x width	1016 mm x 1219 mm / 40 in x 48 in Can be used for different pallet dimensions	1200 mm x 800 mm / 47.2 x 31.5 in	

MiR Pallet Rack   **MiR** EU Pallet Rack

	MiR Pallet Rack	**MiR** EU Pallet Rack
DESIGNATED USE		
Pallet Rack for MiR500 & MiR1000	For autonomous pickup and unloading of 40" x 48" pallets	For autonomous pickup and unloading of EUR-pallets
DIMENSIONS		
Length	1300 mm / 51.2 in	1300 mm / 51.2 in
Width	1182 mm / 46.5 in	1182 mm / 46.5 in
Height	442 mm / 17.4 in	352 mm / 13.9 in
COLOR		
RAL color	RAL 7011 / Iron Grey	RAL 7011 / Iron Grey
PAYLOAD		
Pallet Rack payload	1350 kg / 2976 lbs	1350 kg / 2976 lbs

     Specifications may vary based on local conditions and application setup.

MiR Charge 24V

MiR Charge 48V

DESIGNATED USE		
Automatic charger for MiR robots	The robot moves and connects to the charging station	The robot moves and connects to the charging station

DIMENSIONS		
Width	620 mm / 24.4 in	622 mm / 24,5 in
Height	350 mm / 13.8 in	287 mm / 11.26 in
Depth	120 mm / 4.7 in	487 mm / 19,17 in (in operational mode) 237 mm / 9.33 in (when folded)
Weight	10.5 kg / 22 lbs	20 kg / 440 lbs

RATED OPERATING CONDITIONS		
Ambient temperature range	+5°C to 40°C	+5°C to 40°C
Humidity	10-95% non-condensing	10-95% non-condensing
Power	Output: 24 V, max. 25 A Input: 100/230 V ac, 50-60 Hz	Output: 48 V, Max 40 A Input: 100 V-240 V, 50-60 Hz

COMPLIANCE		
Standard	EN-60335-2-29	EN60335-1-12, EN60335-2-29:2004, EN61000-6-1:2007, EN61000-6-4:2007, TUV Safety Approval

MiR Fleet

DESIGNATED USE	
Centralized control of a fleet of robots	Up to 100 robots
Order handling	Prioritization and handling of orders among multiple robots
Battery level control	Monitoring of robot battery levels and automatic handling of recharging
Traffic control	Coordination of critical zones with multiple robot intersections

TWO SOLUTIONS AVAILABLE	
MiR Fleet PC	Comes as a physical PC box
MiR Fleet Server Solution	For installation in existing server infrastructure

MIR FLEET PC	
Model	NUC7i3DNB
PC	Intel® Maple Canyon NUC
CPU	Intel® Core™ i3-7100U Processor (3M Cache, 2.40 GHz)
RAM	8GB DDR4-2400
SSD	128GB 2.5"
Operating system	Linux Ubuntu 16.04
Network capabilities	1 Gbit Ethernet, no wireless option
Required connections	110V or 230V power socket and Ethernet network cable
Installation requirements	Must run on the same physical network as the robots in general

MIR FLEET SERVER	
Installation file size	3GB
MiR Fleet update file size	~300 MB
Server requirements	Dual core processor with min. 2.1 GHz clock
RAM	Min. 8 GB
HDD	80 GB
Supported operating systems	Ubuntu 18.04 LTS, Ubuntu Server 18.04 LTS, Debian 9, CentOS 7, Redhat Enterprise Linux 7.4

Born Global

Mobile Industrial Robots is rapidly expanding. We have established offices in Denmark (HQ), United States, Spain, Germany, China, Singapore, Korea and Japan and with **+200 distributors** in more than **60 countries** and still more to come, we are able to offer our robots to customers worldwide.

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