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.

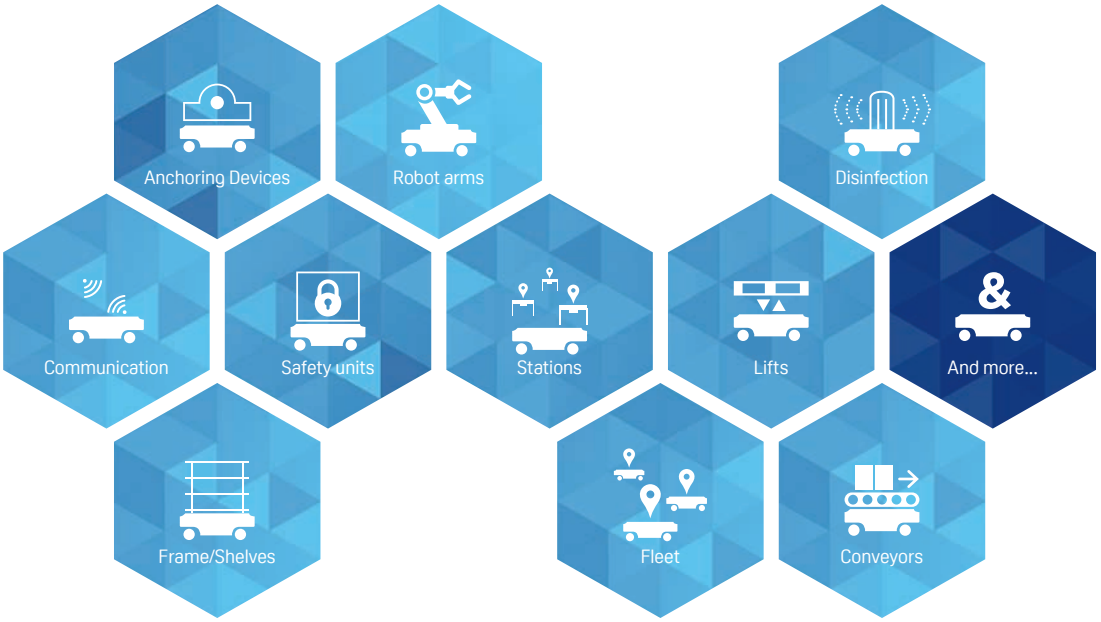
See how companies from different industries around the world – and from family-owned regional businesses to global companies with multiple locations – have found a better way to do logistics with MiR. With local sales offices around the world and a global distribution network, we are ready to support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

MiR | a better way

MiR250

Flexibility

An open interface supports different applications



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

Load weight:
100 kg / 220 lbs

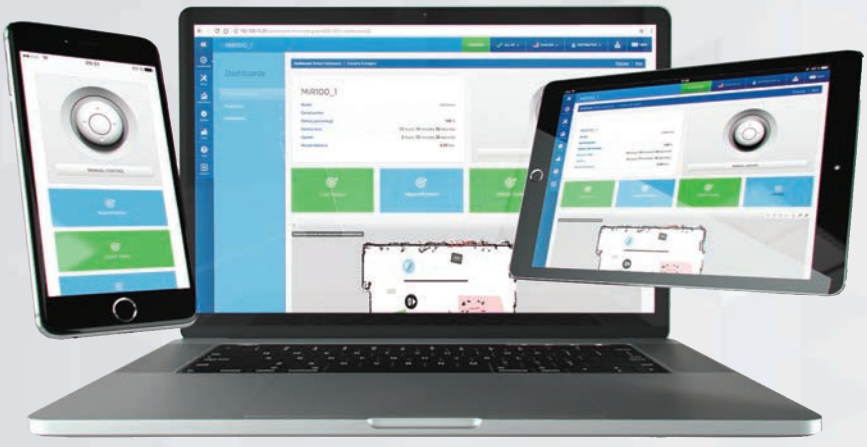
Certifications:
Clean Room Certified

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.

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.



MiR200

Load weight:
200 kg / 440 lbs

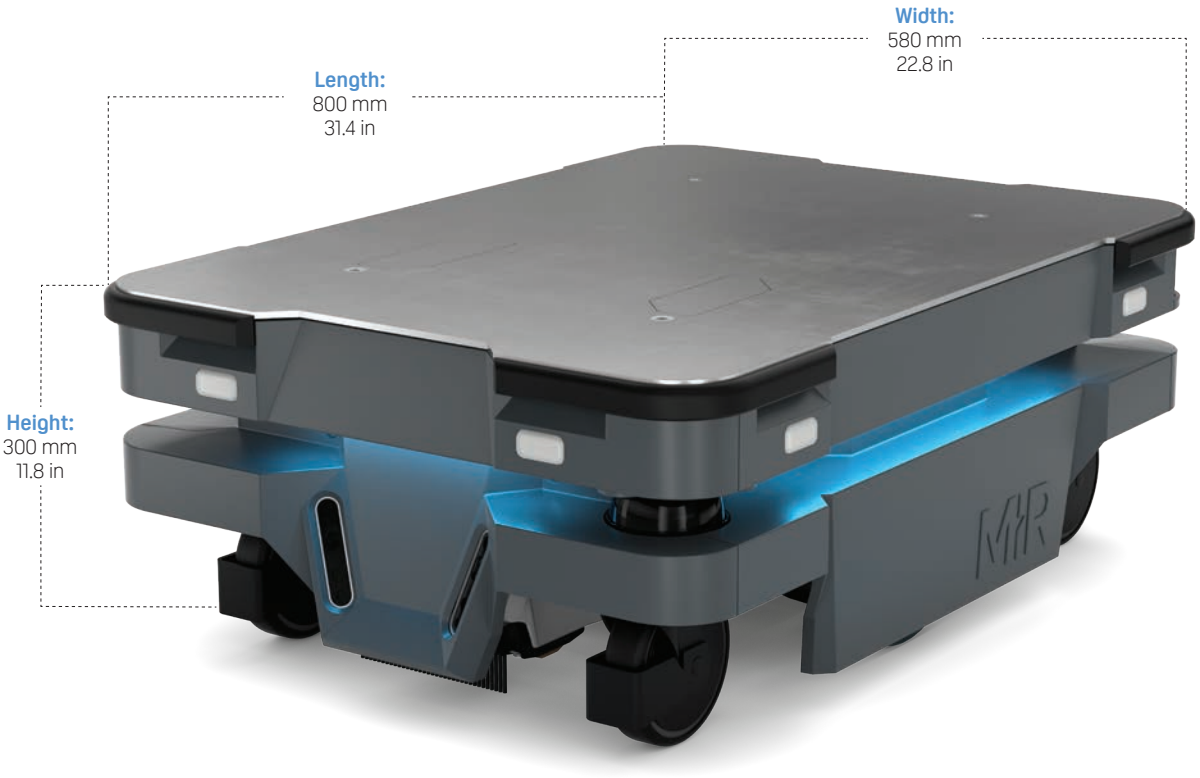
Certifications:
Clean Room certified
ESD approved

MiR Charge 24V

A fully automatic charging solution

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

MiR250



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 – and even drive through doors as narrow as 80 cm.

Increased agility with MiR250 Dynamic
MiR250 Dynamic is another version of MiR250 with 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 very 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

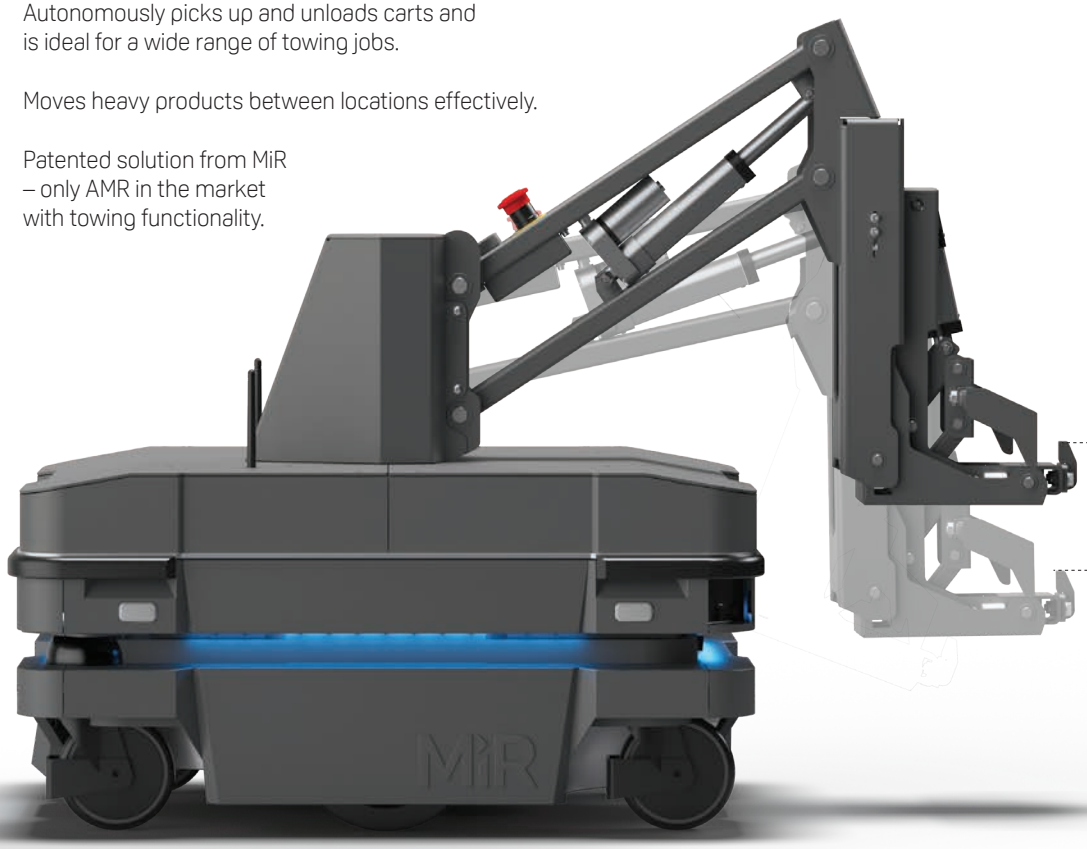
MiR Hook

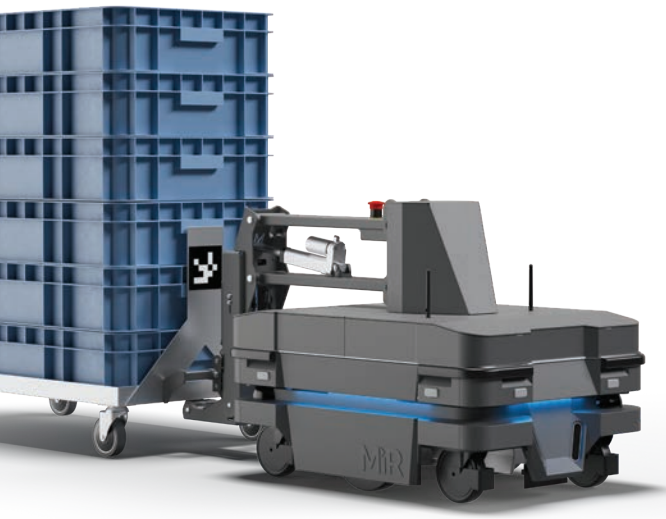
Automated in-house transport solutions

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

Moves heavy products between locations effectively.

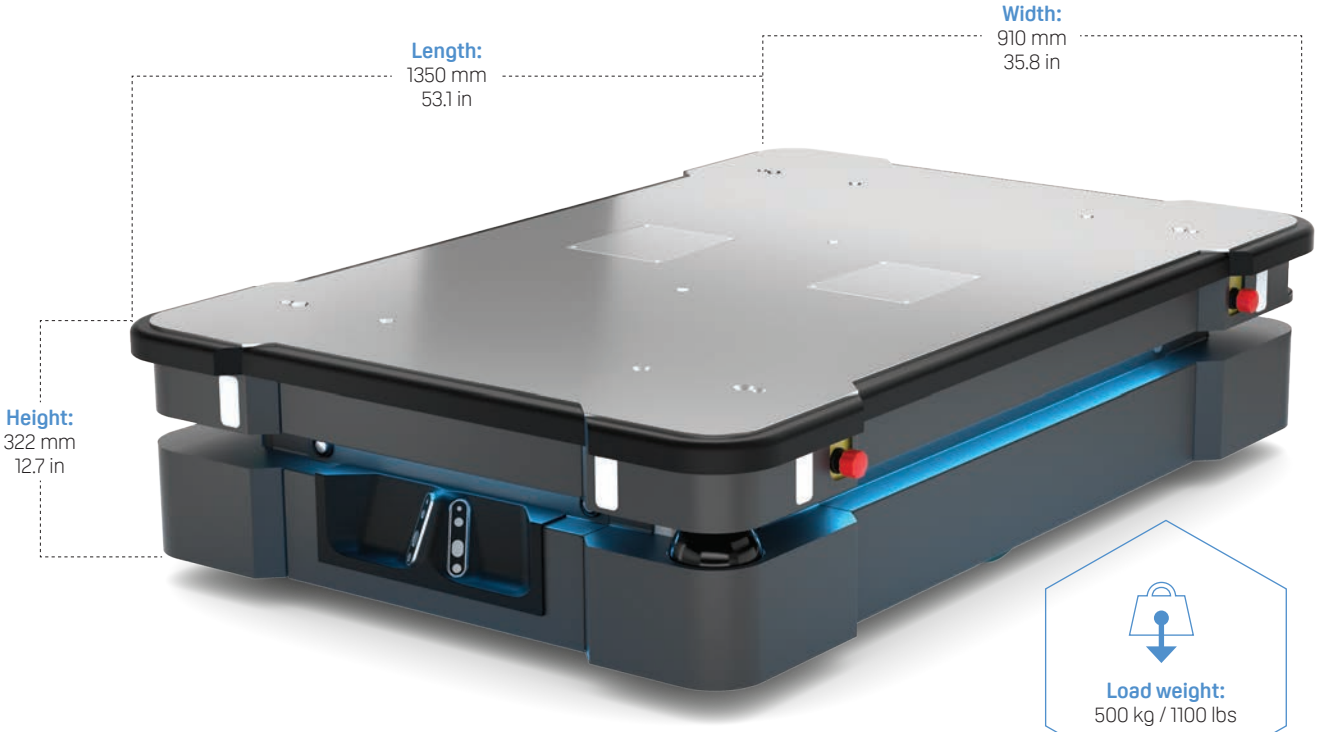
Patented solution from MiR – only AMR in the market with towing functionality.





Towing capacity:
500 kg / 1100 lbs

MiR500



Load weight:
500 kg / 1100 lbs

Safety:
8 safety rated functions

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

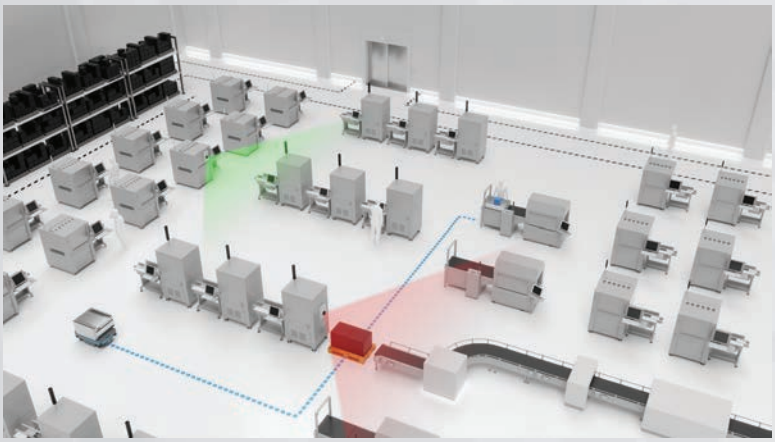
MiR500 and MiR1000 can be deployed with pallet lifts from MiR and can pick up, transport and deliver pallets autonomously. This means that the collaborative robots constitute a safe alternative to traditional forklifts and trucks, which many companies would like to remove from manufacturing halls, as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

MiR AI Camera

Optimize the efficiency of your mobile robots with AI

The next step in the evolution of Autonomous Mobile Robots (AMRs) is the addition of artificial intelligence (AI) to increase the capabilities of the mobile robots. MiR AI Camera works as an extra set of sensors for the MiR robots and makes the robots even more efficient, and improves the overall traffic flow in dynamic environments.



MiR1000

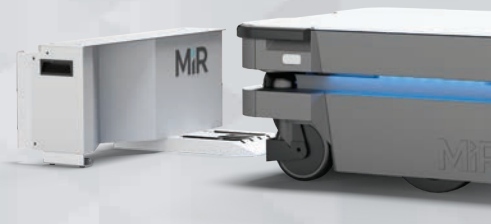
Load weight:
1000 kg / 2200 lbs

Safety:
8 safety rated functions

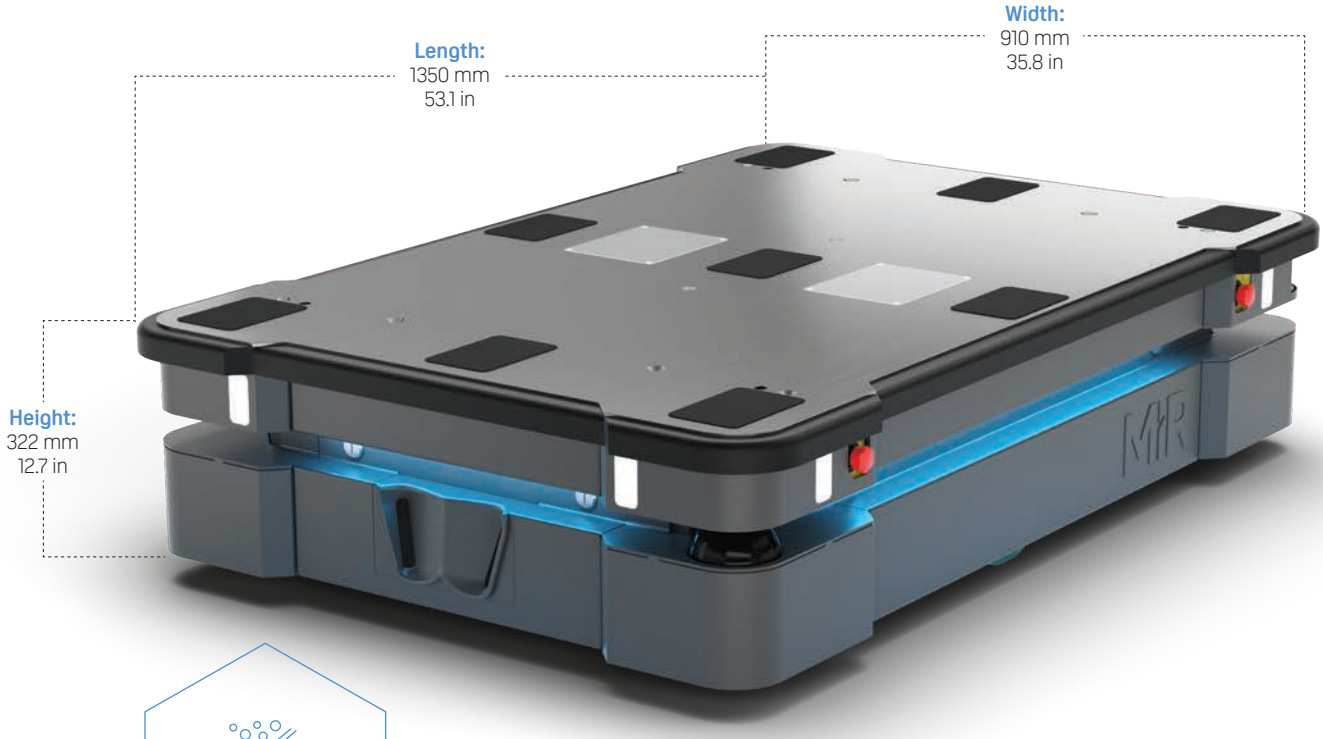
MiR Charge 48V

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.



MiR600



Rating:
IP52

Load weight:
600 kg / 1320 lbs

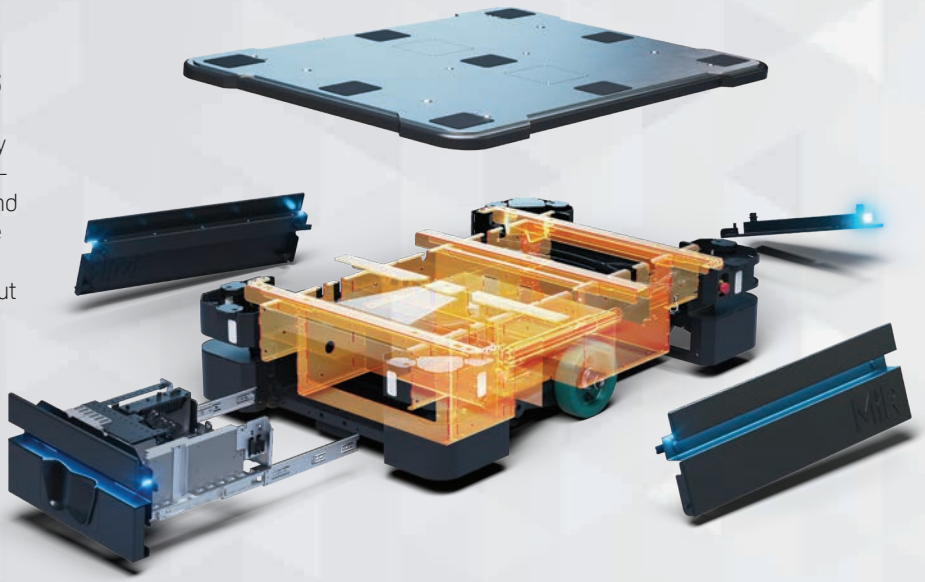
Compliance:
ISO-3691-4*

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

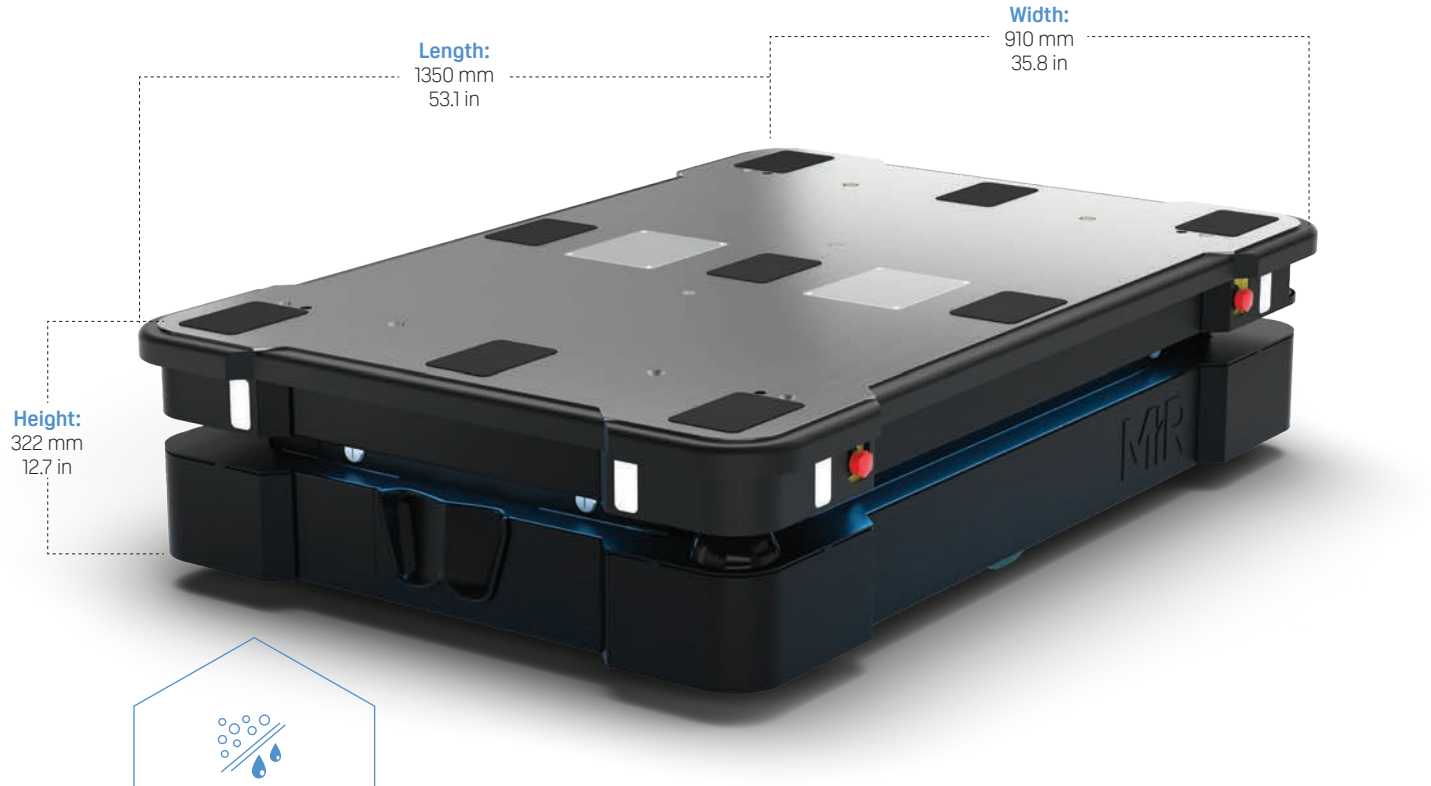
The AMRs can pick-up, transport and deliver pallets or other heavy loads automatically even in highly dynamic environments and constitute a safe and efficient alternative to traditional AGVs, pallet lifts, and forklifts.

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



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.

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

WORKFLOWS

Improve workflows in your facility with MiR robots.

Optimize your productivity by improving internal workflows with collaborative robots from MiR and increase safety among workers at your facility.

INBOUND LOGISTICS

Workflows optimized

1. **Long hauls:** Replace manual handling and forklifts in long hauls between inbound logistics and storage area
2. **Odd size goods:** Effective transport of odd size goods
3. **Cross docking:** Robots can navigate to different areas depending on load

Benefits

- Save labor-hours used on non-value adding transport
- Help overcome labor shortage by handling non-rewarding repeatable tasks
- Reduced number of forklifts needed
- Add flexibility be having on-demand transport availability

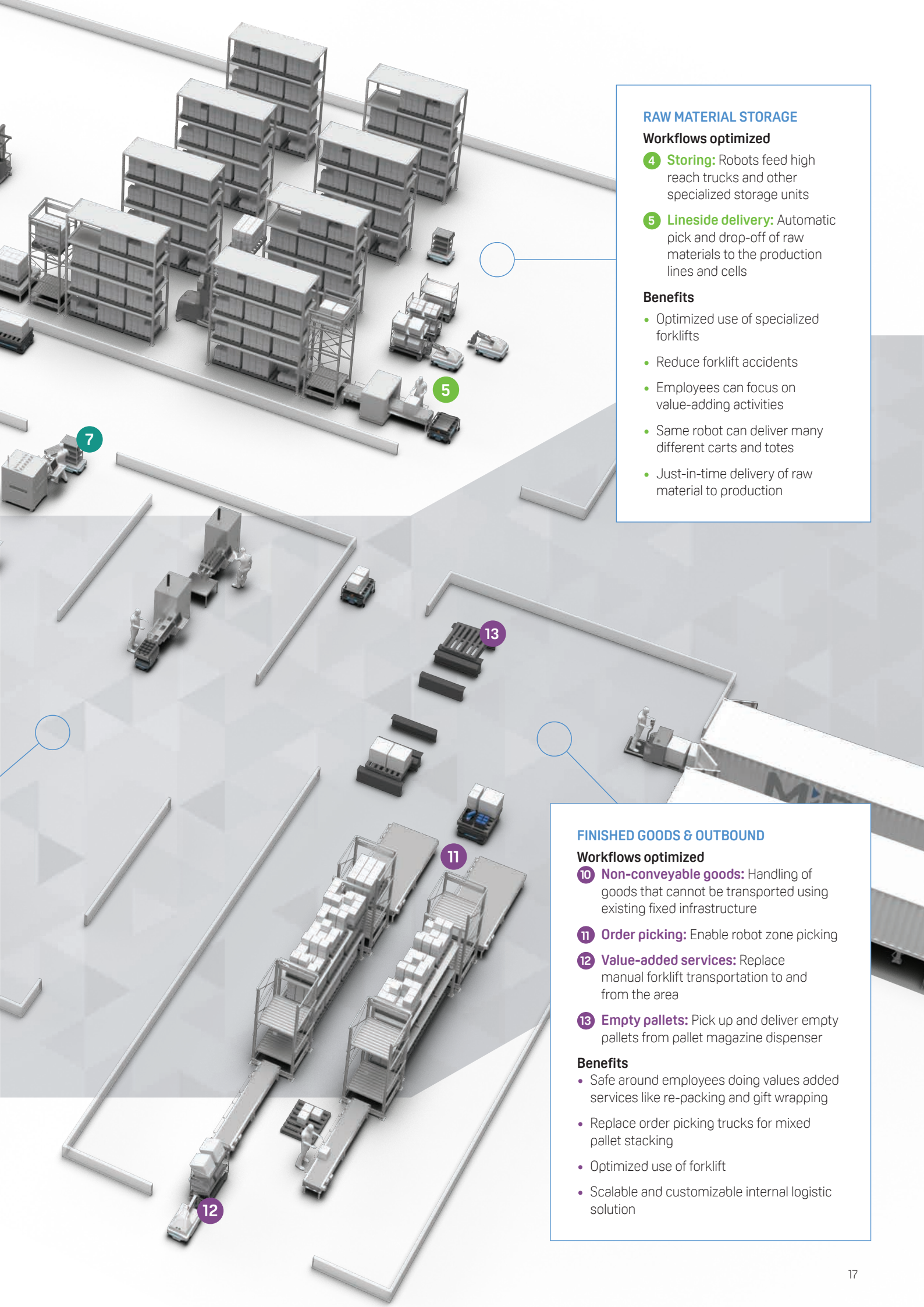
PRODUCTION AND ASSEMBLY LINES

Workflows optimized

6. **Bus route:** Continuously and autonomously move between cells, lines or departments on fixed routes
7. **Pull calls:** Deliver on-demand specific material from storage by call from production – manually or automatically
8. **Work In Progress:** Flexible movement of WIP-parts between production cells and lines
9. **Waste material:** Automate waste material disposal using robots

Benefits

- Infrastructure free robots adds flexibility for the dynamic factory layout and changing workstations
- Eliminating human prone errors and mishaps
- Increase safety among workers as forklifts are removed from the area and replaced by safe collaborative AMRs
- 24/7 reliable and automated production line feeding
- Space optimization by eliminated local storage at production
- Able to drive in forklift or human quarantined areas such as clean room environments



RAW MATERIAL STORAGE

Workflows optimized

4 **Storing:** Robots feed high reach trucks and other specialized storage units

5 **Lineside delivery:** Automatic pick and drop-off of raw materials to the production lines and cells

Benefits

- Optimized use of specialized forklifts
- Reduce forklift accidents
- Employees can focus on value-adding activities
- Same robot can deliver many different carts and totes
- Just-in-time delivery of raw material to production

FINISHED GOODS & OUTBOUND

Workflows optimized

10 **Non-conveyable goods:** Handling of goods that cannot be transported using existing fixed infrastructure

11 **Order picking:** Enable robot zone picking

12 **Value-added services:** Replace manual forklift transportation to and from the area

13 **Empty pallets:** Pick up and deliver empty pallets from pallet magazine dispenser

Benefits

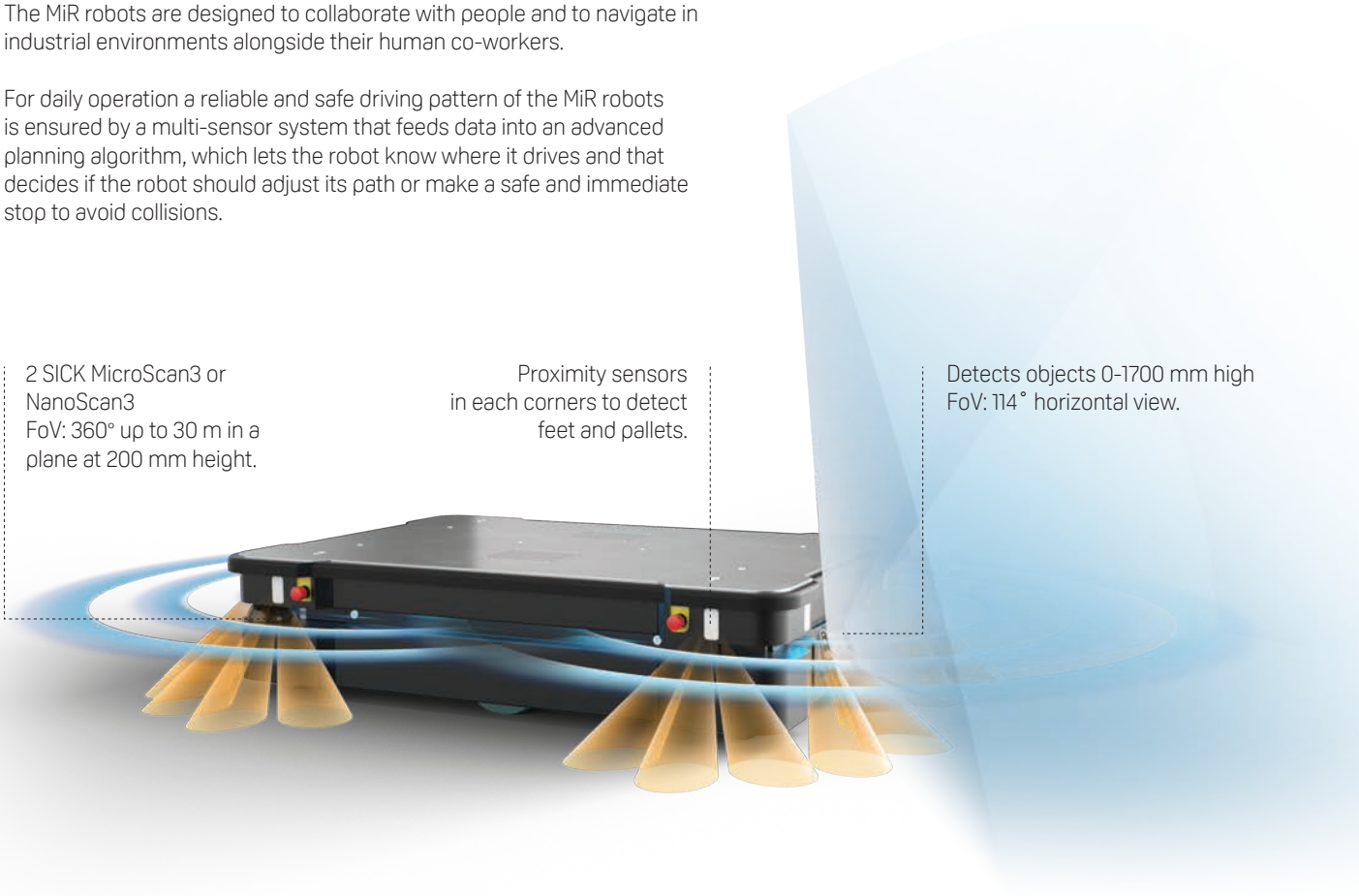
- Safe around employees doing values added services like re-packing and gift wrapping
- Replace order picking trucks for mixed pallet stacking
- Optimized use of forklift
- Scalable and customizable internal logistic solution

Safe Mobile Robots

Designed for driving safely in industrial environments

The MiR robots are designed to collaborate with people and to navigate in industrial environments alongside their human co-workers.

For daily operation a reliable and safe driving pattern of the MiR robots is ensured by a multi-sensor system that feeds data into an advanced planning algorithm, which lets the robot know where it drives and that decides if the robot should adjust its path or make a safe and immediate stop to avoid collisions.



Our mobile robots have all relevant functional safety incorporated. This is based on present safety standards to address potential risks that can occur if the primary safety system for some reason fails.

Safety functions in the MiR Robots

FUNCTION	MiR100	MiR200	MiR250	MiR500	MiR1000	MiR600	MiR1350
E-stop	PLd, cat 3	PLd, cat 3	PLd, cat 3	PLd, cat 3	PLd, cat 3	PLd, cat 3	PLd, cat 3
Field switching	Fail-safe*	PLd, cat 3	PLd, cat 3	PLd, cat 3	PLd, cat 3	PLd, cat 3	PLd, cat 3
Personnel detection	PLd, cat 2	PLd, cat 2	PLd, cat 3	PLd, cat 3	PLd, cat 3	PLd, cat 3	PLd, cat 3
Overspeed detection	Fail-safe*	PLd, cat 3	PLd, cat 3	PLd, cat 3	PLd, cat 3	PLd, cat 3	PLd, cat 3
Field muting/speed monitor			PLd, cat 3	PLd, cat 3	PLd, cat 3	PLd, cat 3	PLd, cat 3
Safe guarded stop			PLd, cat 3	PLd, cat 3	PLd, cat 3	PLd, cat 3	PLd, cat 3
Locomotion			PLd, cat 3	PLd, cat 3	PLd, cat 3	PLd, cat 3	PLd, cat 3
System E-stop			PLd, cat 3	PLd, cat 3	PLd, cat 3	PLd, cat 3	PLd, cat 3
Hold to run						PLc, cat 1	PLc, cat 1
Mode selection						PLc, cat 1	PLc, cat 1
Pallet lift position monitoring						PLb, cat 1	PLb, cat 1
Shelf lift position monitoring						PLb, cat 1	PLb, cat 1
Shelf detection						PLb, cat 1	PLb, cat 1

*Fail-safe means it is designed to fail to a safe state and are single failure tolerant but not designed according to ISO 13849

	MiR100	MiR200
DESIGNATED USE		
Collaborative mobile robot	For smaller transport tasks within the industry, logistics and healthcare	For smaller transport tasks within the industry, logistics and healthcare
DIMENSIONS		
Length	890 mm / 35 in	890 mm / 35 in
Width	580 mm / 22.8 in	580 mm / 22.8 in
Height	352 mm / 13.9 in	352 mm / 13.9 in
Ground Clearance	50 mm / 2 in	50 mm / 2 in
Weight (without battery and payload)	70 kg / 154 lbs	70 kg / 154 lbs
COLOR		
RAL color	RAL 9010 / Pure White	RAL 7011 / Iron Grey
PAYLOAD		
Robot payload	100 kg / 220 lbs (maximum 5% incline)	200 kg / 440 lbs (maximum 5% incline)
SPEED AND PERFORMANCE		
Active operation time	9 hours	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)	Forwards: 1.1 m/s (4km/h) / 3.6 ft/s (2.5 mph) Backwards: 0.3 m/s (1 km/h) / 1.0 ft/s (0.7 mph)
Positioning accuracy		+/- 26 mm / 1 in of position, +/- 8 mm / 0.3 to docking marker
Traversable gap and sill tolerance	20 mm / 0.8 in	20 mm / 0.8 in
POWER		
Battery	Li-NMC, 24 V, 40 Ah	Li-NMC, 24 V, 40 Ah
Charging time	With cable: up to 4.5 hours (0-80%: 3 hours) With charging station: up to 3 hours (0-80%: 2 hours) With charging station: 10-90 %: 1 hour 10 minutes	With cable: up to 4.5 hours (0-80%: 3 hours) With charging station: up to 3 hours (0-80%: 2 hours) With charging station: 10-90 %: 1 hour 10 minutes
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	IP20	IP20
Compliance and approvals	CE, EN1525 & ANSI B56.5 Clean Room Certified (ISO Class 4) EMC EN61000-6-2 EMC EN61000-6-4 ISO13849-1, RIA 15.08	CE, EN1525 & ANSI B56.5 Clean Room Certified (ISO Class 4) ESD Approved EMC EN61000-6-2 EMC EN61000-6-4 ISO12849-1, RIA 15.08
COMMUNICATION		
WiFi	Dual-band wireless AC/G/N/B	Dual-band wireless AC/G/N/B
I/Os	USB and Ethernet	USB and Ethernet
SENSORS		
SICK safety laser scanners	2 pcs. S300 (front and back) for 360° protection around robot	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	3D camera Intel RealSense™ Detects objects 50 mm - 1800 mm in height in front of the robot

Specifications may vary based on local conditions and application setup.

	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
Min. corridor width	1350 mm / 53.1 in	With dynamic footprint and SICK safety configuration: 850mm / 33.5 in
Min. doorway width	1300 mm / 52 in	With dynamic footprint and SICK safety configuration: 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)
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	IP21	IP21
Compliance & approvals	CE, EN1525 & ANSI B56.5 ESD Certified - optional Clean Room Certified (ISO Class 4) - optional EMC: EN61000-6-2, EN61000-6-4, (EN12895) ANSI R15.08	EN1525 & ANSI B56.5 ESD Certified - optional Clean Room Certified (ISO Class 4) - optional EMC: EN61000-6-2, EN61000-6-4, (EN12895) ANSI R15.08
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	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.	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	11.5 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

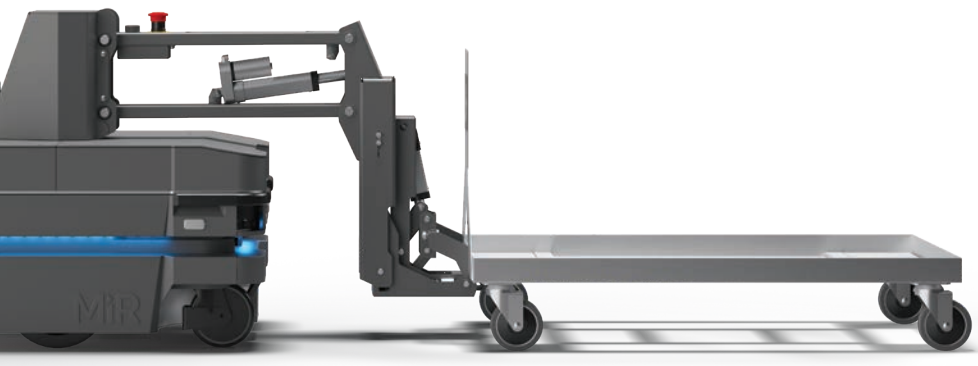
Ambient temperature range (humidity 10-85% non-condensing)	+5°C to 40°C
IP class	IP21

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 with lowered pins	77 mm / 3 in
Height with raised pins	114 mm / 4.5 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	150,000 cycles

Specifications may vary based on local conditions and application setup.

	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	30 mm / 1.2 in	30 mm / 1.2 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 with max. payload.	7 hours	10.5 hours
Active operation time without payload.	8.75 hours	12 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): +/-8 mm/ 0.2". Angle: +/- 1°	Position (center of robot): +/-5 mm/ 0.2". Angle: +/- 1°
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 ratio	Up to 1:8 (e.g. 15 min charge = 2 hours run time)	Up to 1:8 (e.g. 15 min charge = 2 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	IP21	IP21
Compliance	8 safety functions according to ISO 13849-1 Standards: ISO 3691-4, EN1525, ANSI B56.5 EMC: EN12895, EN61000-6-2, EN61000-6-4. RIA 15.08	8 safety functions according to ISO 13849-1 Standards: ISO 3691-4, EN1525, ANSI B56.5 EMC: EN12895, EN61000-6-2, EN61000-6-4. RIA 15.08
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	920 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): +/-3 mm/ 0.1". Angle: +/- 1°	Position (center of robot): +/-3 mm/ 0.1". Angle: +/- 1°
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 10-95% non-condensing)
IP Class	IP52	IP52
Compliance	13 safety functions according to ISO 13849-1 Standards: ISO 3691-4, EN1525, ANSI B56.5 EMC: EN12895, EN61000-6-2, EN61000-6-4. ANSI R15.08	13 safety functions according to ISO 13849-1 Standards: ISO 3691-4, EN1525, ANSI B56.5 EMC: EN12895, EN61000-6-2, EN61000-6-4. ANSI R15.08
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

Specifications may vary based on local conditions and application setup.

	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
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

Specifications may vary based on local conditions and application setup.