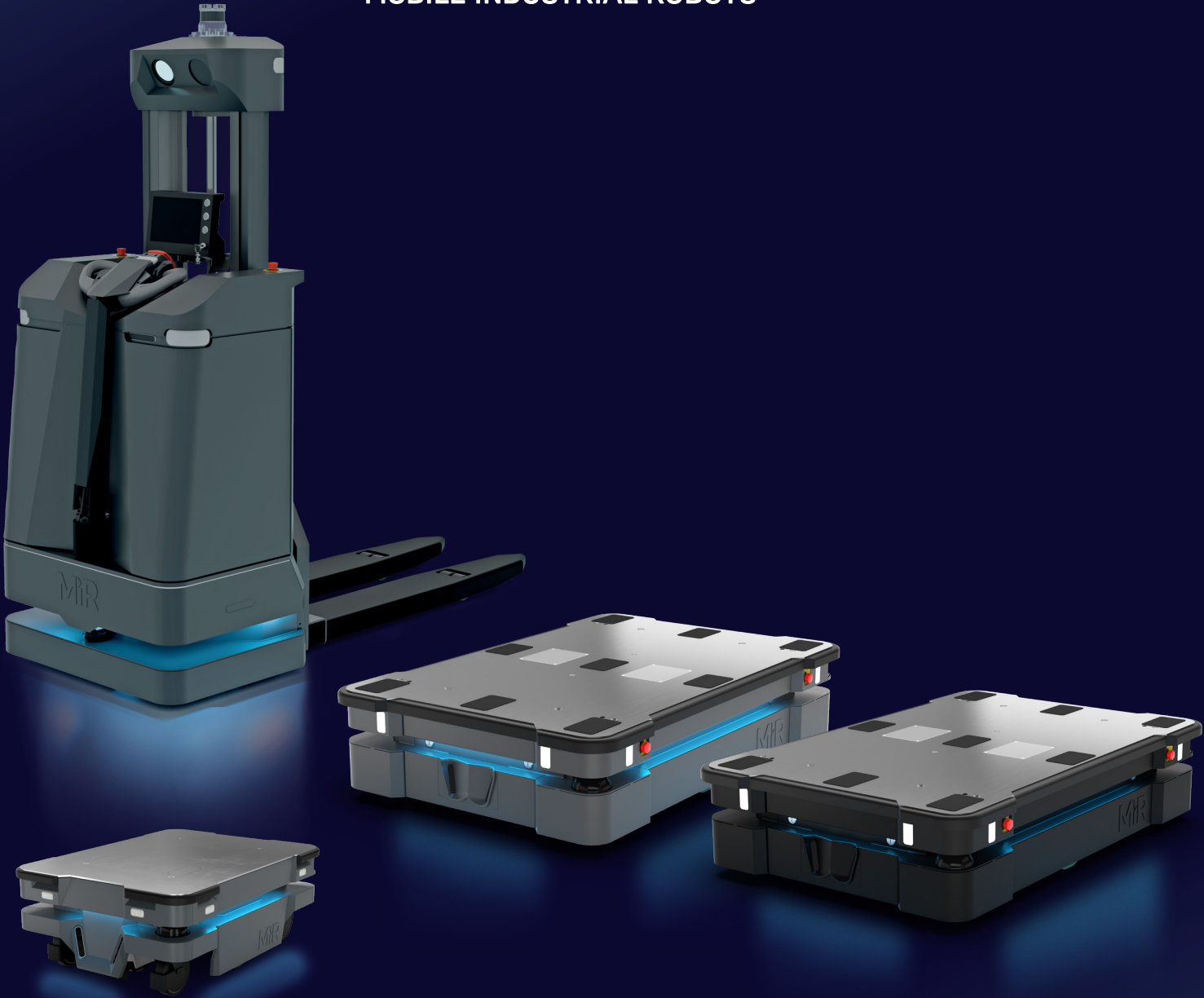
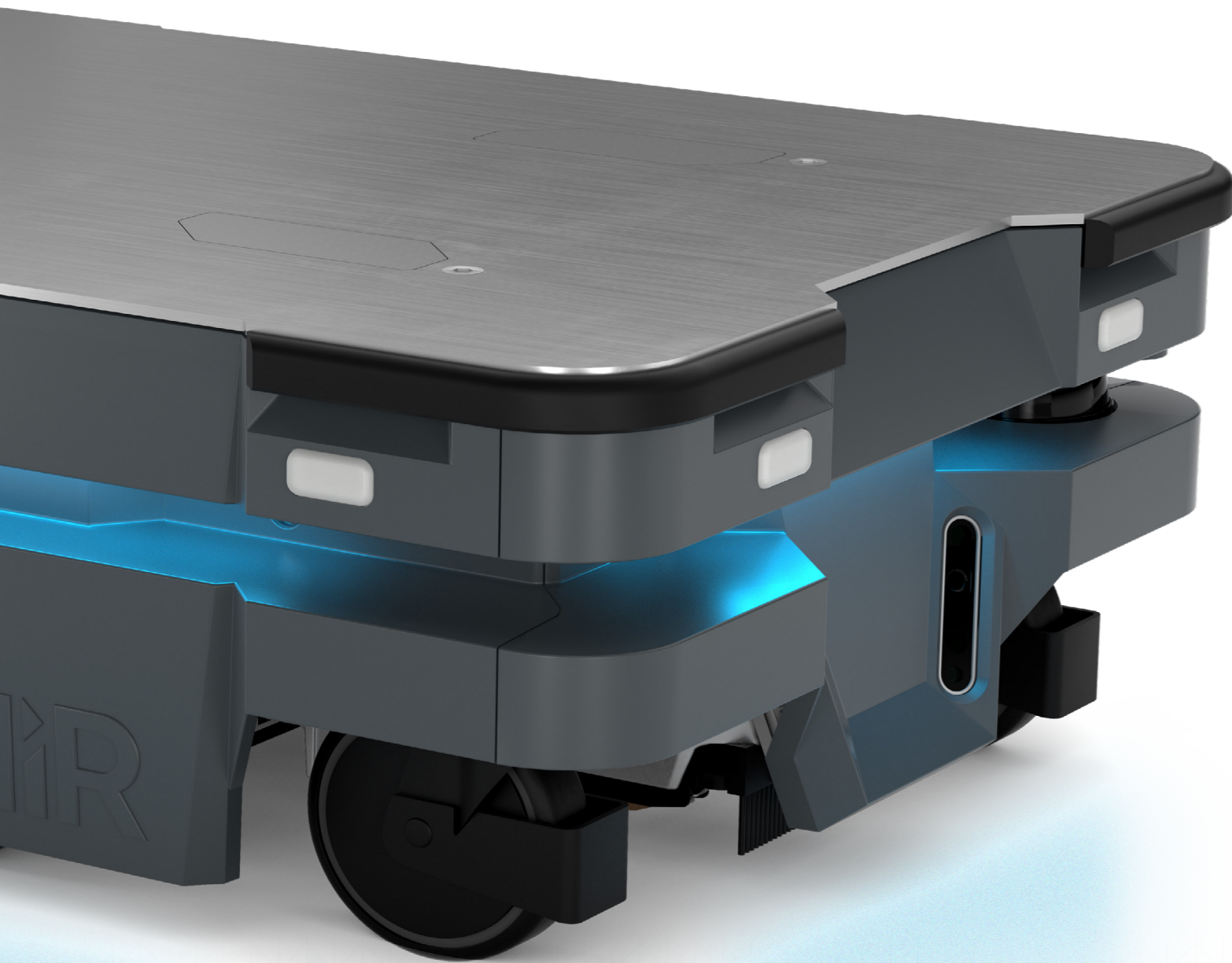


MiR

MOBILE INDUSTRIAL ROBOTS



Automation is on the move



Want to optimize your productivity, streamline internal workflows, and increase your competitiveness? Bring your internal logistics up to speed with MiR's autonomous mobile robots. As a one-stop shop for all your material handling needs, we offer solutions that can move light to heavy payloads and pallets from floor to floor, automating repetitive and injury-prone tasks while working 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 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.

End-to-End Solution



As a MiR customer you get the benefits of reliable, flexible and high-performing AMRs controlled by the same, user-friendly software. But you get more than that. We use our size and strength to offer customers a full solution setup. We can cover you worldwide via our local MiR offices and the worlds' largest AMR partner network, consisting of distributors and integrators. Thanks to our extensive market experience and application knowledge, our team of application engineers can help ensure successful deployments. Get full coverage with our service house and service level agreements, that you can customize for your needs, while you have access to our Support Portal and MiR Academy to get technical knowledge yourself.

Flexibility

Depending on your processes, which internal logistics workflows you want to automate, and what materials you are moving, you need an autonomous mobile robot that can adapt flexibly to your needs. With our open interface, MiR provides the platform for automation of your internal logistics.

MiR Go

The MiR robots are flexible platforms, ready for your application to be integrated. MiR Go is the world's largest eco system for third-party applications for AMRs. Via MiR Go you get access to +160 applications for your inspiration and contact details for the suppliers.

MiR Go Approved

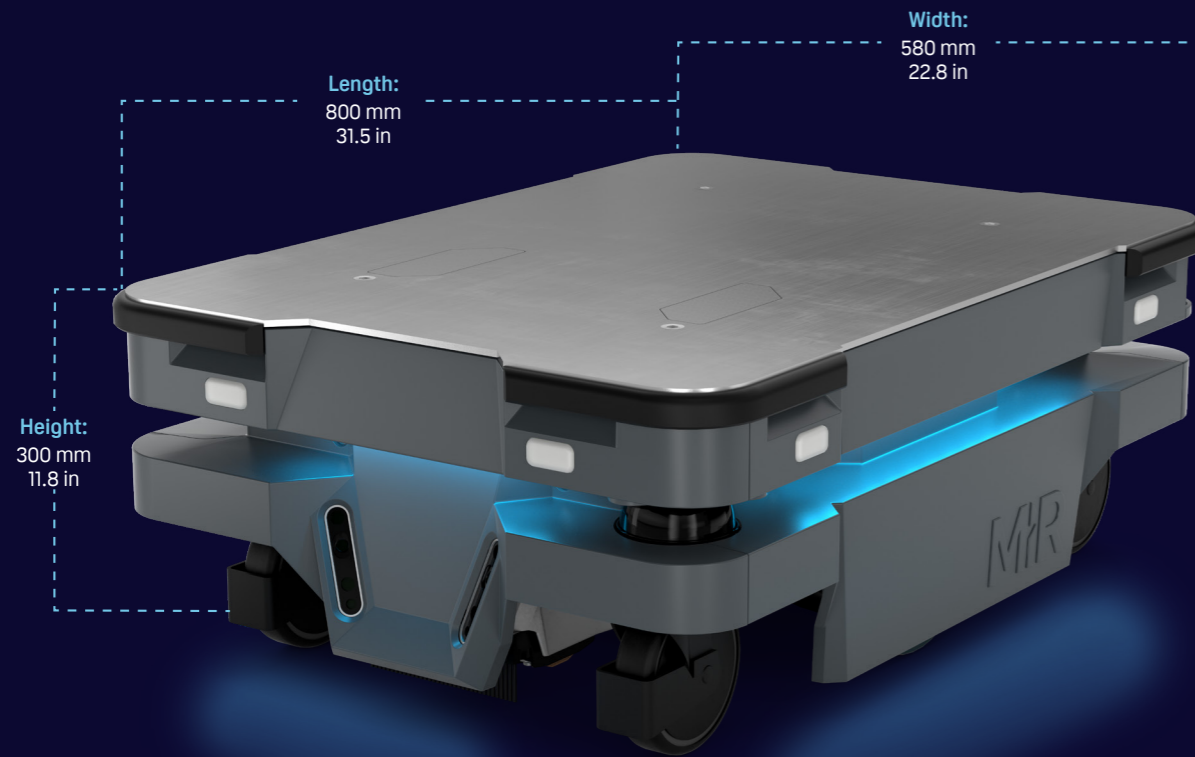
In MiR Go you also find certified products. A certification from MiR is not just a stamp on a paper, it is a procedure where we test important features such as functionality and safety.

Find the MiR Go Certified products here:

mir-robots.com/mir-go-certified



MiR250



Load weight:
250 kg / 551 lbs



Certifications:
Clean Room Certified
(Optional)



ESD version:
Optional

The MiR250 has a small footprint of just 580 x 800 mm and stands at a mere 30 centimeters tall. Despite its size, it can effortlessly handle up to 250 kg, moving along at 2 meters per second. This agility sets it apart from all other AMRs on the market, making it exceptionally adaptable to demanding environments.

Thanks to its compact design, it can navigate through spaces as narrow as 80 centimeters. This means that doors and elevators, which might pose challenges for other mobile robots, are a breeze for the MiR250.

Built for the long haul, the MiR250 is designed for easy maintenance and can operate around the clock, with the option for swift battery replacement. Moreover, it adheres to the latest safety standards - we therefore believe it is the safest AMR on the market.



MEGATECH

Megatech Industries in Spain has deployed a fleet of MiR250 robots.

The company has significantly improved shopfloor safety by replacing traditional forklifts with the safe AMRs, while also improving productivity.

MiR250 Shelf Carrier

Streamline your logistics

Together with the MiR250, we have developed a standard top module: The MiR Shelf Carrier 250.

The Shelf Carrier 250 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:

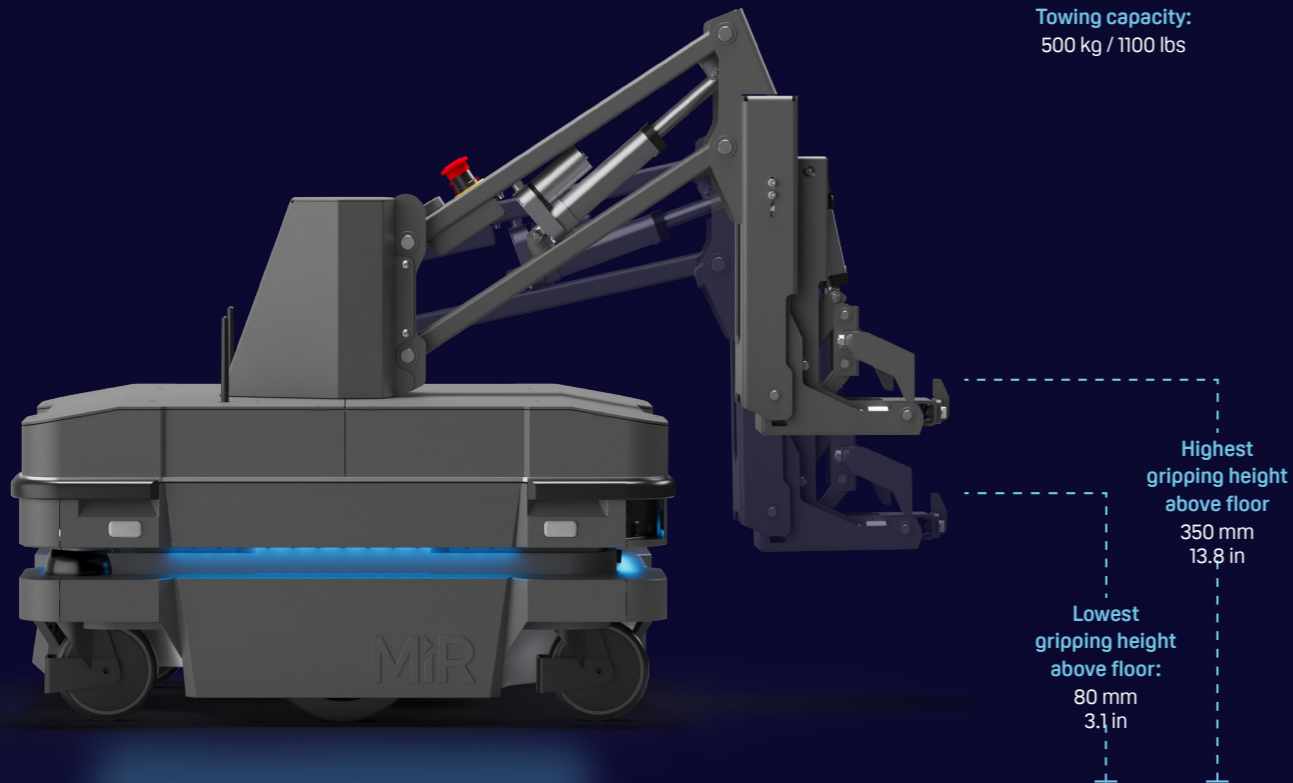
mir-robots.com/solutions



MiR250 Hook



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

Mobile Cobot

A collaborative robot arm meets autonomous mobility

The Mobile Cobot combines MiR's AMR platform with Universal Robots' collaborative robot arms.

Seamlessly connected through a flexible, modular platform by Enabled Robotics, this system adapts to various workflows. The cobot arm's size and mounted grippers can be adjusted for different payloads and tasks.

Known for ease of use, the Mobile Cobot features an intuitive all-in-one interface for efficient programming of both the AMR and cobot arm, enhancing operational efficiency



Automated in-house transport solutions

MiR250 Hook autonomously picks up and unloads carts and is ideal for a wide range of towing jobs.

It moves heavy products between locations effectively.

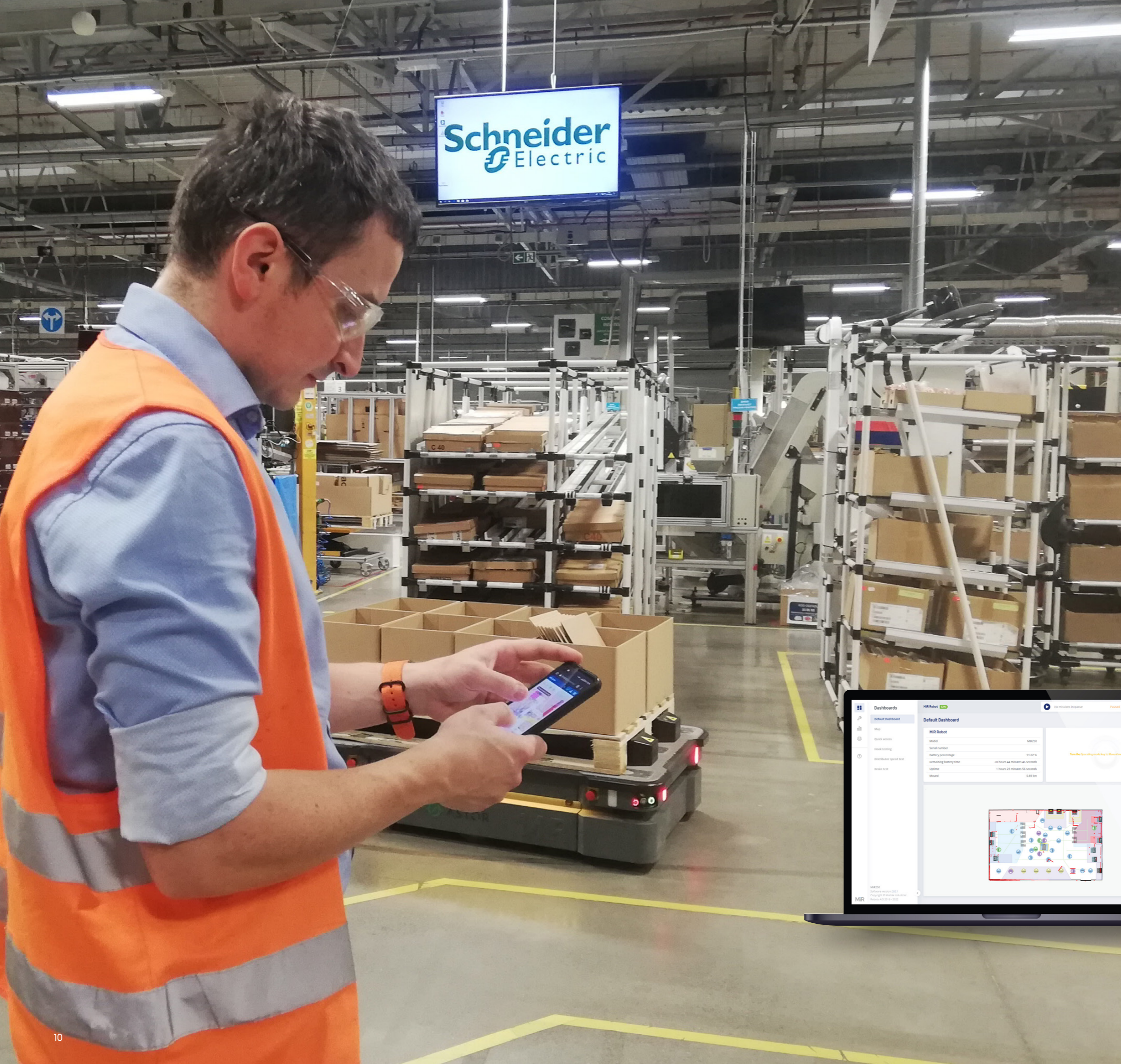
This is a patented solution from MiR – only AMR in the market with towing functionality.

MiR Charge 48V

A fully automatic charging solution

The MiR robots move and connect autonomously to the charging station. MiR250, MiR600, MiR1350, and MiR1200 Pallet Jack use the MiR Charge 48V, that is IP52 rated.



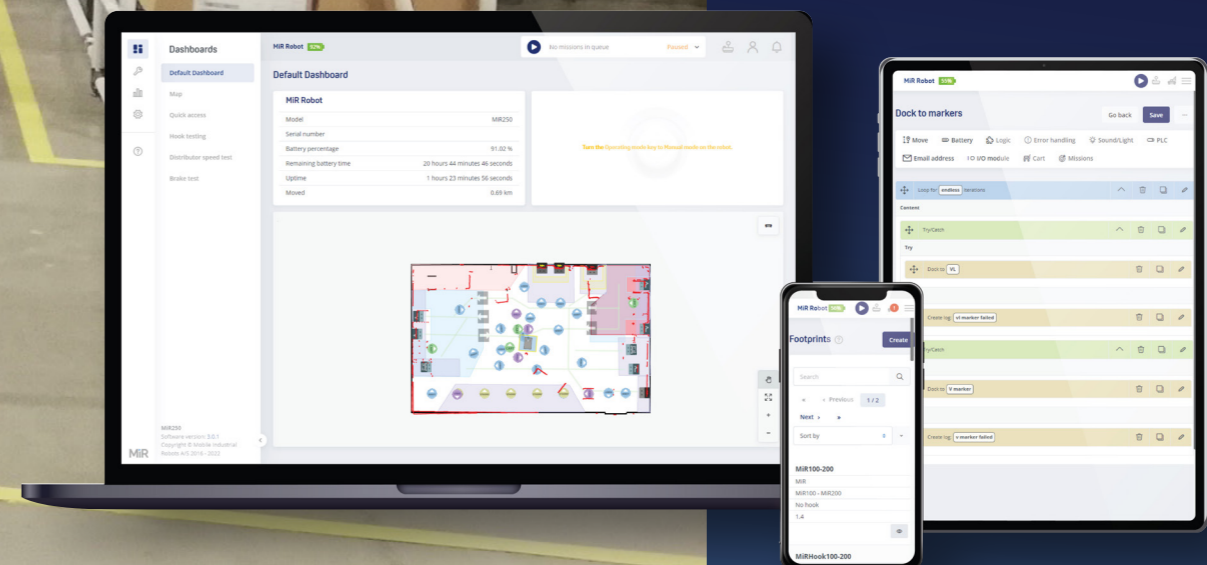


Schneider
Electric

Ease of use with intuitive interface

When you buy a MiR robot, it comes with the latest software already installed, free of charge.

- Works on PC, tablet and smartphone.
- Customizable dashboard makes it easy to tailor the interface to the individual user's needs.
- Easy to deploy and redeploy the mobile robot for different missions, adding new routes etc.



Safe Mobile Robots

Designed for driving safely in industrial environments

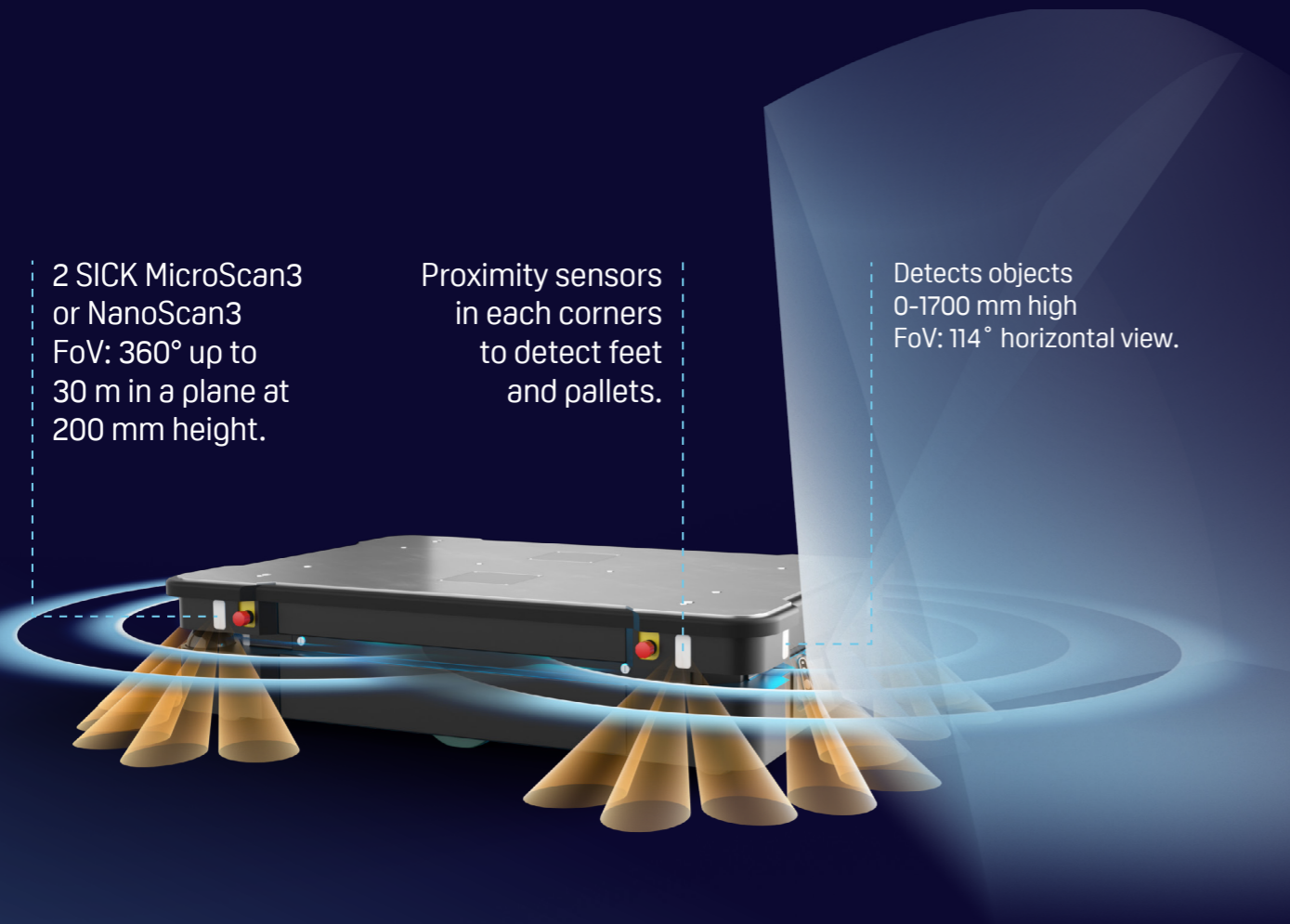
The MiR robots are designed to collaborate with people and to navigate in industrial environments alongside their human co-workers.

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.

2 SICK MicroScan3 or NanoScan3
FoV: 360° up to
30 m in a plane at
200 mm height.

Proximity sensors
in each corners
to detect feet
and pallets.

Detects objects
0-1700 mm high
FoV: 114° horizontal view.



Next Generation AMRs raise the bar for AMR safety

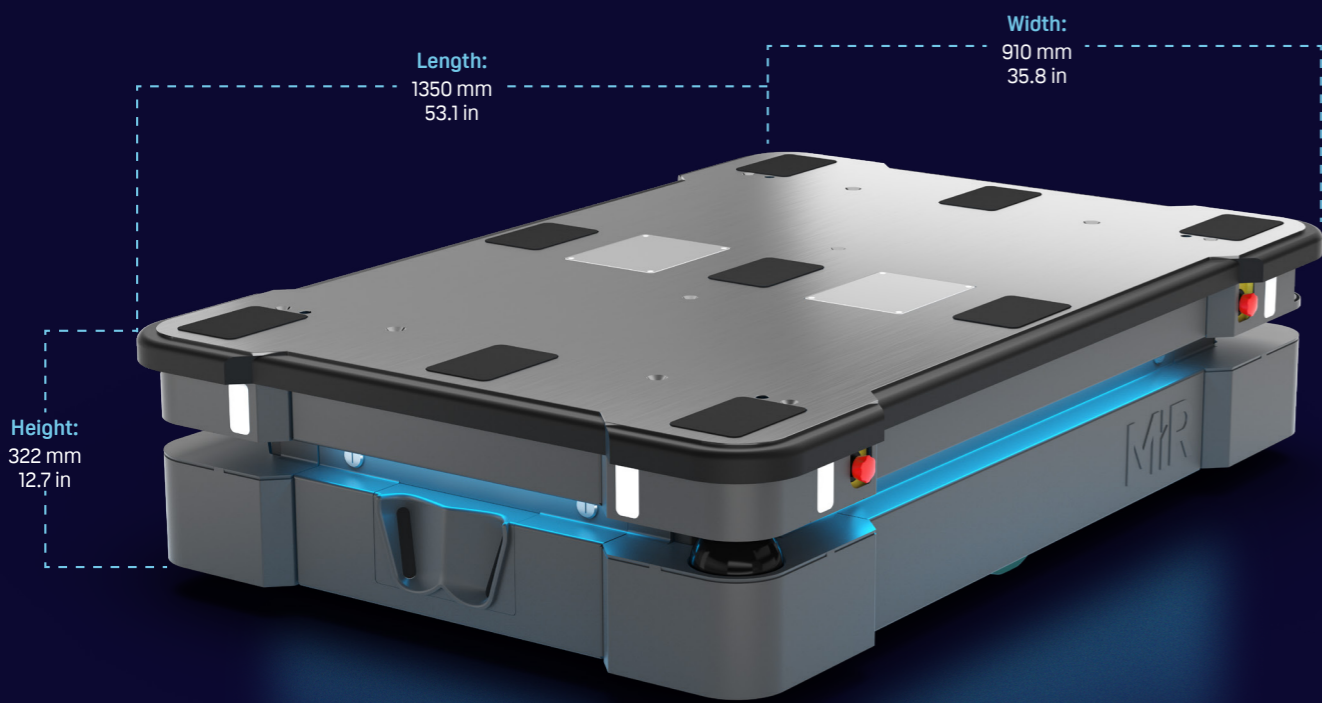
A fundamental part in meeting safety standards is to include additional functions that address unanticipated risks to ensure that the robots react safely even if primary control systems fail for any reason. The MiR600 and MiR1350 are the first AMRs designed to comply with ISO 3691-4. The MiR600 and MiR1350 have 13 safety functions according to ISO 13849-1, certified by TÜV Rheinland. Minor exceptions to ISO 3691-4 are identified and handled via MiR's Safety & Compliance documentation, which is always available per request.

The safety functions of the MiR robots are documented with a Sistema report, which can be shared by MiR via our distributors.

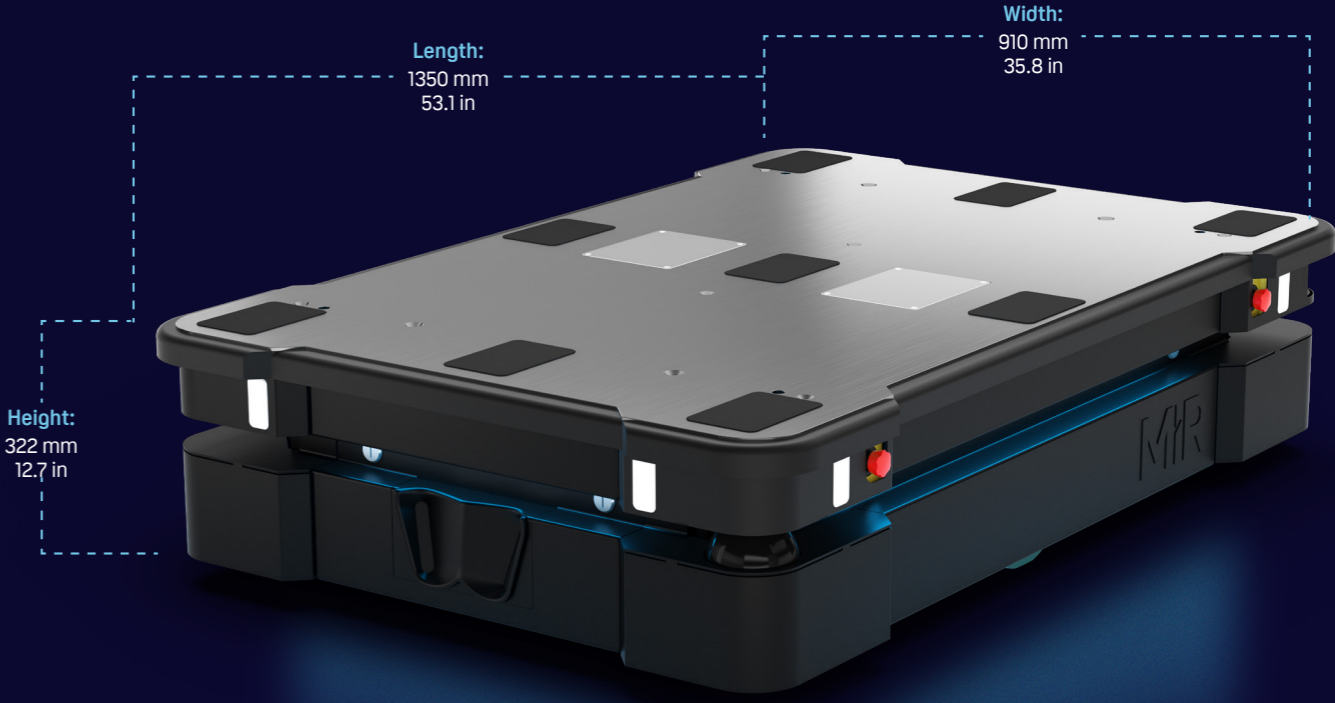
FUNCTION	MiR600	MiR1350
E-stop	PLd, cat 3	PLd, cat 3
Overspeed detection	PLd, cat 3	PLd, cat 3
Field switching	PLd, cat 3	PLd, cat 3
Personnel detection	PLd, cat 3	PLd, cat 3
Field muting/speed monitor	PLd, cat 3	PLd, cat 3
Safe guarded stop	PLd, cat 3	PLd, cat 3
Locomotion	PLd, cat 3	PLd, cat 3
Hold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





MiR600



MiR1350



- 
Load weight:
 600 kg / 1 320 lbs
- 
Compliance:
 ISO-3691-4*
- 
Rating:
 IP52
- 
Safety:
 13 safety functions

- 
Load weight:
 1350 kg / 2976 lbs
- 
Compliance:
 ISO-3691-4*
- 
Rating:
 IP52
- 
Safety:
 13 safety functions

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.

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.

MiR1200 Pallet Jack



Unique features of the MiR1200 Pallet Jack

- AI-based perception enables shrinked-wrapped pallet recognition and rapid, precise, and reliable pallet detection.
- Built for challenging environments with IP52 rating and reliable industrial design, created through collaboration with Logitrans, leveraging +80 years of lift-product expertise.
- Features high battery capacity and fast charging, ensuring seamless operation in 24/7 workflows.
- Equipped with MiR's latest software and seamlessly integrates with MiR Fleet alongside other MiR robots.
- Analyzes the landing zone with a 3D sensor for detection of obstacles on the floor, overhead, and around, ensuring precise and secure pallet placement.
- Incorporates load-jam detection, which enables the robot to safely interact with compromised pallets.
- Designed to comply to ISO 3691-4 safety standard and offers comprehensive 360-degree safety coverage.
- Manual tiller for employees to easily interact with the robot in the same manner they are used to working with traditional forklifts

Smarter moves, faster results

The MiR1200 Pallet Jack is establishing new standards in smarter, faster and more efficient material handling. This state-of-the-art solution boasts AI, robust power, and industrial-grade quality to provide streamlined pallet detection, transport, and delivery from floor-to-floor in challenging environments.



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

MiR Shelf Lift

Optimize transportation of heavy loads without changing facility layout.

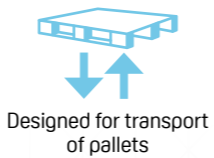
With **MiR Shelf Lift**, the MiR600, and MiR1350 can autonomously pick up a cart or shelf, transport and deliver it. This ensures a flexible transportation of heavy loads of different sizes, without the need of a pallet rack.



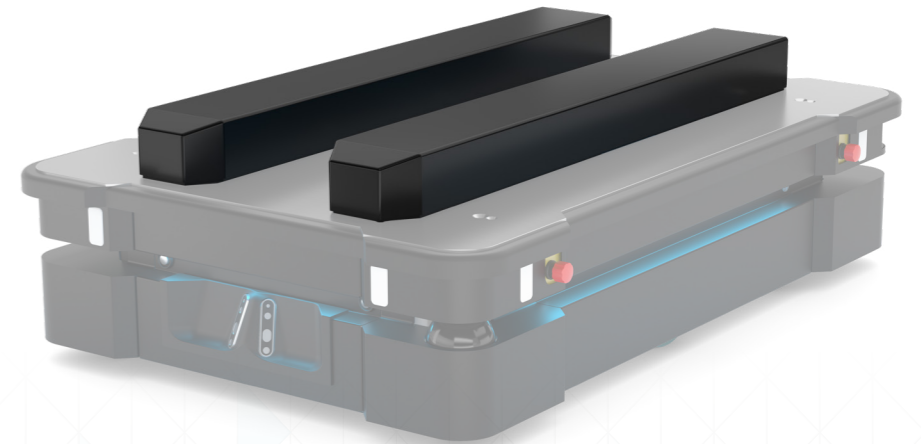
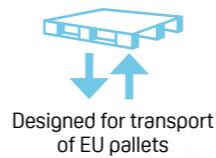
Novo Nordisk

Five **MiR500s** 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.

MiR Pallet Lift



MiR EU Pallet Lift



MiR Fleet Enterprise

MiR Fleet Enterprise is a scalable, secure, and seamlessly integrated software solution designed for advanced AMR operations. This advanced system delivers high-performance fleet management, strong cybersecurity, and continuous innovation, ensuring your AMR operations remain optimized and future-ready.



- **Cybersecurity:** MiR Fleet Enterprise aligns with the IEC 62443 Part 4-2 (SL-C 3), offering single sign-on, audit logging, flexible database security, malware protection, and DoS attack prevention
- **Efficient Scalability & Performance:** Event-driven architecture enables real-time updates lower computational load, and seamless scaling for fleets over 100 AMRs.
- **Enterprise-Ready:** Windows-based, with an easy installation wizard, secure MSSQL database, cloud/virtual integration, and digitally signed installer for security and compliance.



Join our training programs and become part of the growing community of MiR experts worldwide!

From free online training to blended training programs with certified trainers, MiR Academy can help you build the skills to deploy, operate, and scale your MiR system.

Our training programs are designed to be hands-on, practical, and directly applicable to your operations, making sure you gain the confidence and expertise needed to maximize the potential of your MiR robots.



[Visit the Academy Page on Our Website](#)

Hands-On Learning Our training programs are designed to provide practical, hands-on experience, ensuring that participants can apply what they learn directly to their operations.

Expert Trainers: All our trainers are certified experts with extensive experience in deploying and managing MiR systems.

Flexible Training Options: With both free self-paced online training and a wide selection of in-person training sessions, we offer flexible training options to suit your schedule and learning preferences.

Global Reach: Our 7 training labs around the world ensure that you can access quality training no matter where you are located.

Comprehensive Coverage: From daily operation to commissioning and maintenance, our training programs cover all aspects of working with MiR robots.

MiR Insights Pro

Cloud-based tool to continuously optimize your deployments of MiR robots with data-driven decisions

With MiR Insights Pro you get a visualization of data, that enables you to monitor, track, and analyze your entire fleet of MiR robots to improve the fleet's performance, uptime and obtain even faster ROI for your MiR robots.

Monitor fleet and robot data over long periods of time with Data Dashboards:

- Track your sites' KPIs such as distance driven, completed missions, and robot utilization rate.
- Identify when specific events occurred, such as abrupt WiFi signal changes or unexpected battery discharges, to self-troubleshoot and maximize the uptime of your MiR robots.
- Correlate data across multiple robots to analyze areas where you can improve the performance of your fleet and increase the overall productivity.

Get your robots' activities throughout your facility visualized with Heatmaps:

- Detect areas with poor WiFi coverage or with overlapping access points to ensure that the robots operate efficiently and reliably.
- Optimize your usage of MiR robots and avoid potential bottlenecks by monitoring high-traffic areas during peak times of the day.
- Find precise locations in your map where robots intersect more frequently to improve your mission planning and increase throughput.



Global service setup to maximize uptime for your MiR robots

Concerned about downtime in your production or logistics operations? Do you rely on AMRs to keep your processes running smoothly? Would you like the assurance that your AMR fleet is always maintained and ready for unexpected issues?

In the worst-case scenario, when your AMRs are not performing as they should and you need them operational immediately, MiR is here to support your fleet with a comprehensive range of tailored service options.

MiR Service Level Agreement

All new MiR robots come with a one-year Standard Service Level Agreement included in the robot price. Our Service Level Agreement model provides peace of mind by ensuring consistent, high-quality support and performance. Enjoy the following benefits:

- **Minimized Downtime:** Rapid response times to minimize operational disruptions
- **Cost Predictability:** Fixed annual billing for better financial planning

[Link to MiR Service Page](#)

SERVICE LEVEL AGREEMENT

Standard

MiR ticket support via MiR Customer Portal	✓
MiR Ticket Response	Within 8 hours
MiR Onsite Response	Priority over non-SLA
Discount on spares, Application & Field Support hours and MiR training courses	10% discount
Access to MiR's Preventive Maintenance checklist	✓

MiR Care Service Package

For a streamlined solution, the MiR Care Service Package offers a pre-customized service bundle recommended by MiR. With this package, you will benefit from the best coverage at a highly competitive price. Enjoy excellent value and peace of mind with the complete bundle, providing comprehensive support to keep your robots running at peak efficiency.

MiR Care Service Package includes:

- Standard Service Level Agreement
- 24/7 Call Center
- Software Upgrade
- MiR Insights Pro

Customized Service Agreement Package

Every robot user has unique service needs, which is why we offer fully customizable packages designed specifically for you. While we recommend the pre-customized MiR Care Service Package for optimal coverage and support, tailored to your needs, we understand that some users may require a more comprehensive or fully customized solution. Rest assured, we are here to support you in creating the perfect package to match your exact requirements.

Annual Services

All Annual Services require a Service Level Agreement. This agreement functions as an annual subscription, billed on a yearly basis and subject to renewal each year.

- Extended Warranty
- 24/7 Call Center
- Software Upgrade
- MiR Insights Pro

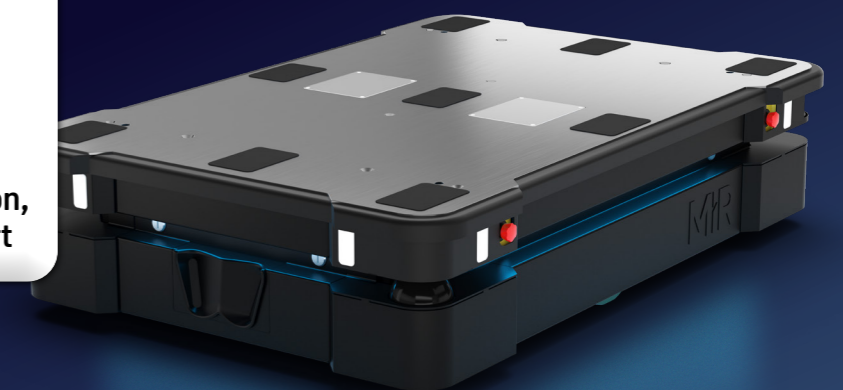
Stand-alone Service Products

Stand-alone services are available for purchase separately by robot customers without requiring a Service Level Agreement

- Application Support
- Full Inspection
- Wi-Fi Assessment
- Technical Training
- Upgrade Support



Quick access to MiR documentation, service & support



Get your MiR robots at a low hourly cost

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 an 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

Do you have a workflow that you are ready to automate with AMRs?

We help you make different basic calculations to get an overview of how many AMRs you need for your application and costs.

Check out how many mobile robots you need in our AMR calculator:

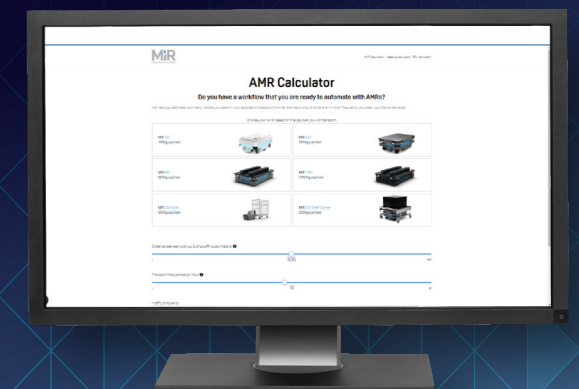
mobile-industrial-robots.com/robot-calculator

Calculate the expected ROI for your application:

mobile-industrial-robots.com/roi-calculator

Estimate your hourly and monthly leasing cost:

mobile-industrial-robots.com/leasing-calculator



FORVIA

A fleet of 14 MiR robots automates internal logistics workflows in a 24/7 operation at FORVIA Clean Mobility in Pisek, CZ.

MiR250 robots are used to transport parts from the warehouse to the production, while MiR600 robots transport finished goods from the production to the logistics area, and bring back empty pallets from the logistics area to the production to be re-used.

FORVIA has had a less than 2 year ROI for its MiR robots, while having increased productivity and shop floor safety.



RUNNER (XIAMEN) Corp. has automated its internal transportation and material handling through a fleet of twelve autonomous mobile robots. With the user-friendly and intuitive nature of MiR AMRs, RUNNER successfully helped the employees acquiring AMR operation skills. Now, the company is planning to expand this solution to other plants within the group network.

TECHNICAL SPECIFICATIONS



MiR250

GENERAL INFORMATION

Designated use	Autonomous mobile robot (AMR) for internal transportation of small- and medium-sized loads	
Color	RAL7011, Iron Gray	

DIMENSIONS

Length	800 mm	31.5 in
Width	580 mm	22.8 in
Height	300 mm	11.8 in
Weight	94 kg	207.2 lbs
Ground clearance	25 - 28 mm	1.0 - 1.1 in
Load surface	800 x 580 mm	31.5 x 22.8 in

PAYLOAD

Maximum payload	250 kg	551 lbs
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SPEED AND PERFORMANCE

Maximum speed	2.0 m/s (7.2 km/h) 6.6 ft/s (4.4 mph)	
Operational corridor width	With default setup: 1 450 mm 57 in	
Operational corridor width for two robots passing	With default setup: 3 000 118 in	
Accuracy, docking to VL marker	± 3 mm 0.12 in on X-axis, ± 3 mm 0.12 in on Y-axis, ± 0.5° yaw	
Accuracy, moving to position	± 60 mm 2.36 in on X-axis, ± 85 mm 3.35 in on Y-axis, ± 4° yaw	
Traversable gap tolerance	Up to 20 mm 0.79 in	
Operational doorway width	1 500 mm 59.1 in (default setup)	
Active operation time with max. payload	Up to 13 h	
Active operation time with no payload	Up to 17 h 30 min	
Maximum incline/decline	± 5% at 0.5 m/s 1.6 in	

POWER

Battery type	Lithium-ion	
Charging ratio	Up to 1:16 (10 min charging gives 2 h 40 min runtime with maximum payload)	
Number of full charging cycles	Minimum 3 000 cycles	

ENVIRONMENT

Environment	For indoor use only	
Ambient temperature range, operation	0–40°C 32–104°F	
Humidity	20–95% non-condensing	
IP rating	IP 21	
Floor conditions	No water, no oil, no dirt	

COMPLIANCE

EMC	EN 61000-6-4, EN 61000-6-2, EN 12895	
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Safety standards for industrial vehicles	ISO 3691-4 (Except Clause 4.4, 4.9.4, 5.1, 6, and Annex A), ISO 13849-1, ISO 13850, ISO 12100, ITSDF B56-5, RIA R15.08-1	
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SAFETY

Safety functions	Twelve safety functions according to ISO 13849-1. The robot stops if a safety function is triggered.	
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COMMUNICATION

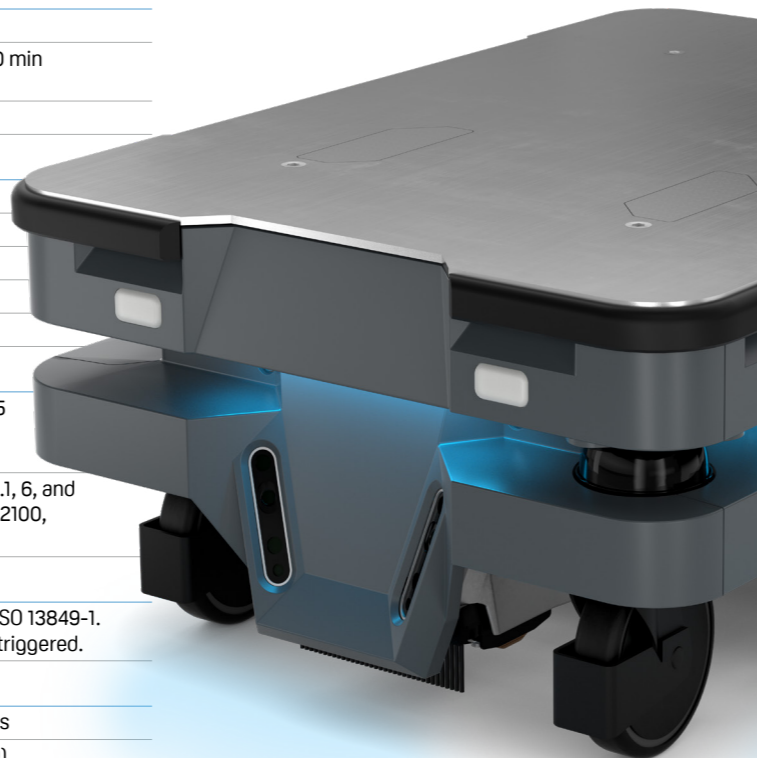
WiFi	2.4 GHz and 5 GHz, 2 external antennas	
I/O connections	4 digital inputs, 4 digital outputs (GPIO), 1 Ethernet port, 1 Auxiliary emergency stop	

SENSORS

SICK safety laser scanners	2 pcs, nanoScan3 (front and rear), give 360° visual protection around the robot	
3D cameras	2 pcs, 3D camera Intel RealSense™ D435	
Proximity sensors	8 pcs	

LIGHTS AND AUDIO

Audio	Speaker	
Signal and status lights	Indicator lights on four sides, eight signal lights (two on each corner)	



MiR Hook 250

GENERAL INFORMATION

Designated use	For small- and medium-sized transport tasks within industry logistics, fully-automated pick-up and delivery of carts	
Color	RAL 7011 / Iron Gray	

DIMENSIONS

Gripping height	80–350 mm 3.1–13.8 in	
Weight with MiR250 (without battery or payload)	188 kg 414 lbs	

PAYLOAD

Maximum tow weight	Up to 500 kg 1100 lbs at 1% incline - 300 kg 661 lbs at 5% incline	
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SPEED AND PERFORMANCE

Operational corridor width	2 250 mm 88.6 in with maximum payload and a 700 × 1 150 mm 27.6 × 45.3 in cart	
Traversable gap tolerance	Up to 20 mm 0.79 in	
Operational doorway width	With default setup: 1 700 mm 66.9 in	
Active operation time with maximum payload	Up to 10 h 15 min	
Active operation time with no payload	Up to 14 h 7 min	
Maximum incline/decline	1% with maximum payload and 40% acceleration 5% with 300 kg 661 lbs, maximum 0.5 m/s 1.6 ft/s	

POWER

Number of full charging cycles	Minimum 3 000 cycles	
--------------------------------	----------------------	--

ENVIRONMENT

Environment	For indoor use only	
Ambient temperature range, storage	1 month: -20–60°C -4–140°F 3 months: -20–+45°C -4–113°F	
IP rating	IP 21	
Floor conditions	No water, no oil, no dirt	

SAFETY

Emergency stop	Triggered by pressing the Emergency stop button	
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SENSORS

3D camera	1 Intel RealSense™ D435	
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MiR Shelf Carrier 250

GENERAL INFORMATION

Designated use	The MiR Shelf Carrier is an anchoring device that makes it possible to lock to shelves and move them	
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Color	RAL 9005 / Signal Black - glow 10	
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DIMENSIONS

Length	778 mm	30.6 in
Width	560 mm	22.8 in
Height	77 mm	3 in
Height with MiR250	370 mm	14.6 in
Lifting height	27 mm	1.1 in
Weight with MiR250 (without battery or payload)	146 kg	321 lbs

PAYLOAD

Maximum speed (with maximum payload on a flat surface)	1.2 m/s (4.3 km/h) 3.9 ft/s (2.7 mph)	
Number of lift cycles (with maximum payload)	Minimum 150 000	
Power consumption	35 W	
Operational corridor width	With a shelf: 2 000 mm 78.7 in Without a shelf: 1 250 mm 49.2 in	
Operational doorway width	With a shelf attached: 1 850 mm 72.8 in Without a shelf attached: 1 150 mm 45.3 in	

ENVIRONMENT

IP class	IP 21	
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MiR600

MiR1350

GENERAL INFORMATION

Designated use	Autonomous mobile robot (AMR) for internal transportation of heavy loads and pallets	Autonomous mobile robot (AMR) for internal transportation of heavy loads and pallets
Color	RAL 7011 / Iron Gray	RAL 9005 / Jet Black

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
Weight	240 kg	529.1 lbs	244 kg	538 lbs
Ground clearance	25-27 mm	1.0-1.1 in	25-27 mm	1.0-1.1 in
Load surface	1304 x 864 mm	51.3 x 34 in	1304 x 864 mm	51.3 x 34 in

PAYLOAD

Maximum payload	600 kg	1 322.8 lbs	1 350 kg	2 976 lbs
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SPEED AND PERFORMANCE

Maximum speed	2.0 m/s (7.2 km/h) 6.6 ft/s (4.4 mph)	1.2 m/s (4.3 km/h) 3.9 ft/s (2.7 mph)
Operational corridor width	With default setup: 1800 mm 70.9 in With improved setup: 1 200 mm 47.2 in	With default setup: 1800 mm 70.9 in With improved setup: 1 200 mm 47.2 in
Accuracy, docking to L-marker	± 3 mm 0.12 in on X-axis, ± 3 mm 0.12 in on Y-axis, ± 0.25° yaw	± 3 mm 0.12 in on X-axis, ± 3 mm 0.12 in on Y-axis, ± 0.25° yaw
Accuracy, docking to VL-marker	± 2 mm 0.08 in on X-axis, ± 3 mm 0.12 in on Y-axis, ± 0.25° yaw	± 2 mm 0.08 in on X-axis, ± 3 mm 0.12 in on Y-axis, ± 0.25° yaw
Accuracy, moving to position	± 100 mm 3.94 in on X-axis, ± 83 mm 3.27 in on Y-axis, ± 3.4° yaw	± 100 mm 3.94 in on X-axis, ± 83 mm 3.27 in on Y-axis, ± 3.4° yaw
Traversable gap tolerance	Maximum 29 mm 1.14 in at maximum 0.5 m/s 1,64 ft/s ² , from all angles	Maximum 29 mm 1.14 in at maximum 0.5 m/s 1,64 ft/s ² , from all angles
Operational doorway width	1 650 mm 65 in (default setup) 1 200 mm 47.2 in (improved setup)	1 650 mm 65 in (default setup) 1 200 mm 47.2 in (improved setup)
Active operation time with max. payload	Up to 8 h 20 min	Up to 6 h 45 min
Active operation time with no payload	Up to 10h 45 min	Up to 9 h 50 min

POWER

Battery type	Lithium-ion	Lithium-ion
Charging ratio	Up to 1:12 (30 min charging = 5 h 45 min runtime)	Up to 1:9 (15 min charging = 2 h 15 min runtime with maximum payload)
Number of full charging cycles	Minimum 3 000 cycles	Minimum 3 000 cycles

ENVIRONMENT

Environment	For indoor use only	For indoor use only
Ambient temperature range, operation	5–40°C 41–104°F	5–40°C 41–104°F
Humidity	20–95% non-condensing	20–95% non-condensing
IP rating	IP 52	IP 52
Floor conditions	No water, no oil, no dirt	No water, no oil, no dirt

COMPLIANCE

EMC	EN61000-6-4	EN61000-6-4
Safety standards for industrial vehicles	ISO 13849-1, ISO 3691-4 (except Clause 4.4, 4.9.4, 5.1, 5.2, 6, and Annex A), ISO 12100, ISO 13850, ITSDF B56-5, RIA R15.08-1	ISO 13849-1, ISO 3691-4 (except Clause 4.4, 4.9.4, 5.1, 5.2, 6, and Annex A), ISO 12100, ISO 13850, ITSDF B56-5, RIA R15.08-1

SAFETY

Safety functions	13 safety functions according to ISO 13849-1, certified by TÜV Rheinland	13 safety functions according to ISO 13849-1, certified by TÜV Rheinland
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COMMUNICATION

WiFi (internal PC)	2.4 GHz and 5 GHz, 2 external antennas	2.4 GHz and 5 GHz, 2 external antennas
I/O connections	6 digital inputs, 6 digital outputs	6 digital inputs, 6 digital outputs

SENSORS

SICK safety laser scanners	2 pcs, microScan3 (front and rear), give 360° visual protection around the robot	2 pcs, microScan3 (front and rear), give 360° visual protection around the robot
3D cameras	2 pcs, 3D camera Intel RealSense™ D435	2 pcs, 3D camera Intel RealSense™ D435
Proximity sensors	8 pcs	8 pcs

LIGHTS AND AUDIO

Audio	Speaker	Speaker
Signal and status lights	Indicator lights on four sides, eight signal lights (two on each corner)	Indicator lights on four sides, eight signal lights (two on each corner)

MiR Pallet Lift

GENERAL INFORMATION

Designated use	For autonomous pickup and unloading of pallets and for lift applications	
Color	RAL 9005 / Signal Black	

DIMENSIONS

Frame length	1304 mm	51.3 in
Frame width	910 mm	35.8 in
Total height in lowered position	94 mm	3.7 in
Total height in lifted position	156 mm	6.1 in
Lifting height	60 mm	2.4 in
Lift Length	1200 mm	47.2 in
Lift width	710 mm	28 in

PAYLOAD

Maximum lift payload for MiR600	500 kg	1 100 lbs
Maximum lift payload for MiR1350	1 250 kg	2 756 lbs

PERFORMANCE

Number of lift cycles (with maximum payload)	Minimum 90 000
Lifting speed	Up: 4.0 s Down: 3.2 s

PALLETS

Pallets dimensions	Supported with Lift Pallet Rack: 1 016 x 1 219 mm 40 x 48 in. Can be used for different pallet dimensions.
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GENERAL INFORMATION

Designated use for MiR600 & MiR1350	For autonomous pickup and unloading of 40" x 48" pallets	
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DIMENSIONS

Length	1300 mm	51.2 in
Width	1188 mm	46.8 in
Height	429 ± 3 mm	16.9 ± 0.1 in

COLOR

RAL color	RAL 7011 / Iron Gray	
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PAYLOAD

Pallet Rack payload	1 250 kg	2 756 lbs
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GENERAL INFORMATION

Designated use	Top module for Autonomous Mobile Robots, and/or as a stationary workplace	
Color	RAL 9005 / Signal Black	

DIMENSIONS

Length	1200 mm	47.2 in
Height	87 mm	3.4 in
Total height in lifted position	150 mm	5.9 in
Lifting height	60 mm	2.4 in

PAYLOAD

Maximum lift payload for MiR600	500 kg	1 100 lbs
Maximum lift payload for MiR1350	1 250 kg	2 756 lbs

PERFORMANCE

Number of lift cycles (with maximum payload)	Minimum 90 000
Lifting speed	Up: 4.0 s Down: 3.2 s

PALLETS

EUR-pallets dimensions	1 200 x 800 mm 47.2 x 31.5 in	
Pallet production specifications	EN 13698-1	

MiR EU Pallet Rack

GENERAL INFORMATION

Designated use for MiR600 & MiR1350	For autonomous pickup and unloading of EUR-pallets	
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DIMENSIONS

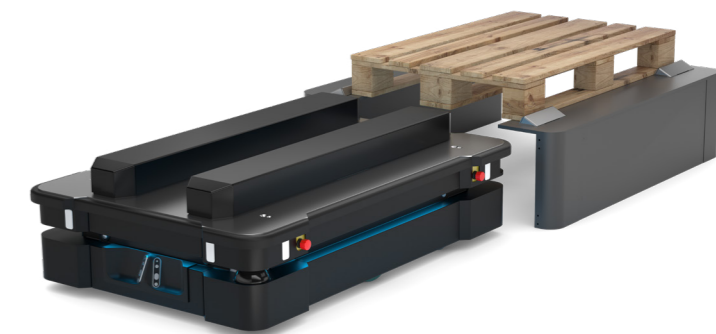
Length	1300 mm	51.2 in
Width	1188 mm	46.8 in
Height	339 mm	13.3 in

COLOR

RAL color	RAL 7011 / Iron Gray	
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PAYLOAD

Pallet Rack payload	1 250 kg / 2 756 lbs	
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MiR Shelf Lift

GENERAL INFORMATION

Designated use	For autonomous pick up and delivery of carts, shelves and other lift applications	
Color	RAL 9005 / Signal Black	

DIMENSIONS

Frame length	1 304 mm	51.3 in
Frame width	910 mm	35.8 in
Total height in lowered position	94 mm	3.7 in
Total height in lifted position	156 mm	6.1 in
Lifting height	60 mm	2.4 in
Lift Length	1 200 mm	47.2 in
Lift width	710 mm	28 in

PAYLOAD

Maximum lift payload for MiR600	500 kg	1 100 lbs
Maximum lift payload for MiR1350	1 000 kg	2 200 lbs

PERFORMANCE

Number of lift cycles (with maximum payload)	Minimum 90 000
Operational corridor width	2 500 mm 98.4 in

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 system

MIR FLEET PC

Model	DFI EB100-KU61-71
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

MIR FLEET SERVER

Installation file size	3GB
MiR Fleet update file size	~300 MB
CPU	Dual core processor with min. 2.1 GHz clock
RAM	Min. 8 GB
Permanent storage	128 GB SSD
Supported operating systems	Ubuntu 18.04 LTS, Ubuntu Server 18.04 LTS, Debian 9, CentOS 7, Redhat Enterprise Linux 7.4

MiR Charge 48V

GENERAL INFORMATION

Designated use	Automatic charger for MiR250, MiR500, MiR600, MiR1000, and MiR1350 robots. The robot moves and connects to the charging station
Color	RAL 7035 / Light Gray

DIMENSIONS

Length	237 mm 9.3 in (with charging plate: 487 mm 19.2 in)
Width	622 mm 25.5 in
Height	287 mm 11.3 in
Weight	20 kg 44.1 lbs

ENVIRONMENT

Humidity	10–95% non-condensing
Ambient temperature range, operation	5–40°C 41–104°F
Maximum altitude	2 000 m 6 562 ft

POWER

Output	48 V, maximum 40 A
Input	100–240 V AC, maximum 14 A, 50–60 Hz

COMPLIANCE

Electrical standards	EN60335-2-29
TüV safety approval	Canada: CSA C22.1-18, SPE-1000-13, CSA C22.2 No. 107.2 -2001US: NFPA 70: 2017, UL 1564: 2015, NFPA 791: 2021 Korea KC certified



MiR1200 Pallet Jack

GENERAL INFORMATION

Designated use	Autonomous mobile robot (AMR) for automated driver-less conveyance of heavy loads
Color	RAL 7011 / Iron Gray

DIMENSIONS

Length	1 934 mm 76.14 in
Width	820 mm 32.28 in
Height	2 120 mm 83.5 in
Weight	750 kg 1 653.5 lbs
Maximum lifting height	1 120 mm 44.1 in

PAYLOAD

Maximum payload	1 200 kg 2 646 lbs
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PERFORMANCE

Maximum speed (with maximum payload on a flat surface)	1.5 m/s (5.4 km/h) 4.9 ft/s (3.6 mph)
Operational corridor width	At full speed: 2.35 m At reduced speed: 1.60 m
Operational corridor width for two robots passing	At full speed: 4.7 m At reduced speed: 3.2 m
Minimum distance between pallets and obstacles (Except other pallets)	500 mm 19.7 in
Operational doorway width	1.35 m
Active operation time with max. payload	Up to 10 h

POWER

Battery type	Lithium-ion, 3 pcs
Battery capacity	102.6 Ah

ENVIRONMENT

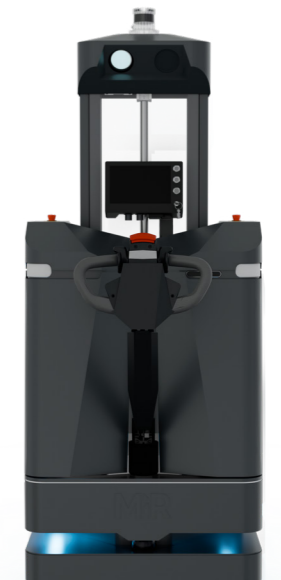
Environment	For indoor use only
Ambient temperature range, operation	5–40°C 41–104°F 5–40°C 41–104°F
Humidity	20–95% non-condensing
IP rating	IP 52
Floor conditions	No water, no oil, no dirt
Maximum incline/decline	Intended for even surfaces
Floor to wheel frictional coefficient	Minimum 0.60
Optimal light conditions	Even and steady lighting (strong directional light can cause the robot to detect non-existent obstacles)

COMPLIANCE

Designed to comply with safety standards for industrial vehicles	EN ISO 12100:2010, ISO 13849-1:2023, EN ISO 13850:2015, EN ISO 3691-4:2023, EN IEC 61000-6-4:2007/A1:2011, EN IEC 61000-6-2:2005/AC:2005, EN 12895:2015+A1:2019
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SENSORS

SICK safety laser scanners	3 pcs, nanoScan (front and rear), give 360° visual protection around the robot
3D cameras	5 pcs, 3D camera Intel RealSense™ D435
3D lidar	1 pcs, on top of the robot



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 **+220 distributors** in more than **60 countries** and still more to come, we are able to offer our robots to customers worldwide.



SALES OFFICES USA

Mobile Industrial Robots Inc - West
10509 Vista Sorrento Parkway, Suite 116
San Diego, CA 92111
USA

+1 (631) 675-1838
west-us@mir-robots.com

Mobile Industrial Robots Inc - East
27175 Haggerty Road, Suite 160
Novi, MI 48377
USA

+1 (631) 675-1838
east-us@mir-robots.com

Mobile Industrial Robots Inc - Kentucky
1007 Old Delaplain Rd STE C
Georgetown, KY 40324
USA

+1 (631) 675-1838
east-us@mir-robots.com

HEADQUARTER

Mobile Industrial Robots AS
Energivej 51
5260 Odense S
Denmark

+45 20 377 577
mail@mir-robots.com

SALES OFFICES EUROPE

Mobile Industrial Robots GmbH
Frankfurter Str. 27
65760 Eschborn - Frankfurt am Main
Germany

+49 175 733 4022
dach@mir-robots.com

MiR Robots S.L.
Calle de Agricultura 106
08019 Barcelona
Spain

+34 649 551 252
south-eu@mir-robots.com

SALES OFFICES ASIA

MiR Robots (Shanghai) Co., Ltd.
Building 10 2nd Floor
1201 Gui Qiao Rd
Jin Qiao Export Processing Zone
Pudong, Shanghai
PRC 201206

+86 158 0172 8490
china@mir-robots.com

Mobile Industrial Robots Japan
MM Park Building 7F
3-6-3, Minato Mirai, Nishi-ku
Yokohama 220-0012
Japan

+81-(0)45-414-3733
apac@mir-robots.com

Mobile Industrial Robots Korea
10F, HiBrand BD.16, Maeheon-ro,
Seocho-gu,
Seoul, 06771,
Korea

+82 2 2155 2888
apac@mir-robots.com

Mobile Industrial Robots Pte. Ltd.
51 Science Park Road,
#02-01 The Aries,
Singapore Science Park 2
117586 Singapore
Singapore

+65 6770 0822
apac@mir-robots.com

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mir-robots.com