

Con una gran flexibilidad,  
transporta de forma  
autónoma hasta **1.350 kg**

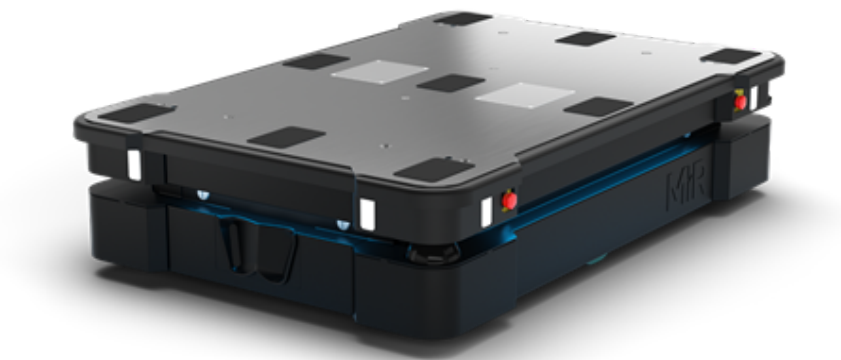
- ✓ Clase de protección IP52.
- ✓ Mayor capacidad de resistencia al polvo y fluidos.
- ✓ Con gran capacidad de carga, optimiza el proceso Logístico.
- ✓ Diseño basado en normas de seguridad vigentes - ISO3691-4.
- ✓ Reutilizable en tareas diferentes con diversos módulos superiores.
- ✓ Navegación fluida y eficiente en entornos dinámicos.



Diseño robusto que  
garantiza una  
vida útil prolongada.



# MiR1350



The MiR1350 is the most powerful AMR from MiR to date. The MiR1350 is compliant with the highest available robot standards making it superior to other AMRs on the market.

## General information

<b>Designated use</b>	For internal transportation of goods and automation of internal logistics
<b>Type</b>	Autonomous Mobile Robot (AMR)
<b>Color</b>	RAL9005, Jet Black
<b>Product design life</b>	Five years or 20 000 hours, whichever comes first
<b>Disclaimer</b>	Specifications may vary based on local conditions and application setup

## Dimensions

<b>Length</b>	1 350 mm   53.1 in
<b>Width</b>	910 mm   35.8 in
<b>Height</b>	322 mm   12.7 in
<b>Ground clearance</b>	25 - 27 mm   1.0 - 1.1 in
<b>Weight (without battery or payload)</b>	233 kg   513.7 lbs
<b>Load surface</b>	1 304 x 864 mm   51.3 x 34 in
<b>Wheel diameter (drive wheel)</b>	200 mm   7.9 in
<b>Wheel diameter (caster wheel)</b>	100 mm   3.9 in

## Payload

<b>Maximum payload</b>	1 350 kg   2 976 lbs
<b>Acceleration limits with maximum payload</b>	0.40 m/s <sup>2</sup>   1,3 fps <sup>2</sup>
<b>Footprint of payload</b>	Robot footprint. Contact MiR if a bigger payload footprint is required.
<b>Payload placement</b>	Place center of mass according to directions in the user guide
<b>Maximum lifting capacity with a MiR EU-/US-/Shelf-lift installed</b>	1 250 kg   2 755 lbs

## Speed and performance

<b>Maximum speed (with maximum payload on a flat surface)</b>	1.2 m/s   3.9 fps
<b>Minimum corridor width for a 90° turn</b>	240 cm   94.5 in
<b>Minimum corridor width for two robots passing</b>	495 cm   194.9 in
<b>Minimum width for pivoting</b>	275 cm   108.3 in
<b>Positioning accuracy (in controlled conditions)</b>	Docking to L-marker: 3 mm   0.11 in deviation on X-axis, 3 mm   0.11 in on Y-axis, 0.25° yaw. Docking to VL-marker: 2 mm   0.09 in deviation on X-axis, 3 mm   0.11 in on Y-axis, 0.25° yaw. Docking to V-marker: 20 mm   0.8 in deviation on X-axis, 20 mm   0.8 in on Y-axis, 2° yaw. Docking to Bar-marker: 10 mm   0.5 in deviation on X-axis, 5 mm   0.18 in on Y-axis, 0.75° yaw
<b>Minimum distance between chargers</b>	1 100 mm   43.3 in
<b>Traversable gap and sill tolerance</b>	Gap: maximum 29 mm   1.1 in at maximum 0.5 m/s   1,64 fps <sup>2</sup> , from all angles. Step: maximum 10 mm   0.4 in at maximum 0.5 m/s   at maximum 40° angle with no payload, not recommended with maximum payload
<b>Maximum acceleration</b>	0.43 m/s <sup>2</sup> (no payload), 0.40 m/s <sup>2</sup> (maximum payload)

<b>Minimum size of detectable object</b>	Camera: 20 mm   0.8 in at 1.25 m   49.2 in. Scanner: 30 mm   1.2 in at 1.7 m   66.9 in or 2.3 m   90.6 in. 40 mm   1.6 in at 2.3 m   90.6 in or 3 m   118.1 in. 50 mm   2 in at 3 m   118.1 in or 3.5 m   137.8 in. 70 mm   2.8 in at 4 m   157.5 in or 5.5 m   216.5 in. Distances depend on scan cycle time (30 or 40 m/s   98.4 or 131.2 mps)
<b>Active operation time with maximum payload</b>	6 h 45 m
<b>Active operation time with no payload</b>	9 h 50 m
<b>Standby time (robot is on and idle)</b>	12 h 30 m

## Battery and charger

<b>Charging time with cable charger (10-90%)</b>	1 h 16 m (approximately)
<b>Charging time with MiR Charge 48V (10 to 90%)</b>	46 min at an ambient temperature of 22°C
<b>Battery type</b>	Li-ion
<b>Battery voltage</b>	47.7 V nominal, min 41 V, max 54 V
<b>Charging current, MiR Charge 48V</b>	Up to 35 Amp with MiR Charge 48V, depending on battery temperature and constant voltage ramping down towards end of charge cycle
<b>Minimum number of full charging cycles</b>	3 000 cycles
<b>Battery capacity</b>	1.63 kWh (34.2 Ah at 47.7V)
<b>Charging ratio and runtime</b>	15 m: 1:12 (3 h 00 m runtime, no payload) 30 m: 1:12,5 (6 h 15 m runtime, no payload) 15 m: 1:9 (2 h 15 m runtime, maximum payload), 30 m: 1:9,6 (4 h 50 m runtime, maximum payload)

## Environment

<b>Ambient temperature, operation)</b>	5°C to 40°C   41°F to 104°F
<b>Ambient temperature, storage</b>	0°C to 50°C   32°F to 122°F
<b>Humidity</b>	10 to 85% non-condensing
<b>Maximum altitude</b>	2 000 m / 6 561 ft
<b>Floor conditions</b>	No water, no oil, no dirt
<b>Environment</b>	For indoor use only
<b>IP class</b>	IP52

## Compliance

<b>EMC</b>	EN61000-6-2, EN61000-6-4, (EN12895)
<b>Safety standards for industrial vehicles</b>	CE, EN1525, ANSI B56.5, ISO3691-4, RIA15.08, ISO13849-1

## Safety

<b>Personnel detection safety function</b>	Triggered by a human or other obstacle in the path of travel.
<b>Emergency stop</b>	Triggered by pressing the Emergency stop button.
<b>Manual control in robot interface</b>	Token-based system for accessing the manual control. The robot issues only one token at a time.
<b>Safe load position</b>	Triggered if the speed exceeds 0.3 m/s while the lift (if applicable) is not in the low position.
<b>Overspeed avoidance</b>	Prevents the robot from driving faster than the predefined safety limit

## Communication

<b>Safety I/O connections</b>	6 digital inputs, 6 digital outputs
<b>WiFi (internal PC)</b>	Router: 2.4 GHz and 5 GHz. Internal computer: WiFi adapter: 2.4 GHz and 5 GHz, 2 internal antennas.
<b>Aux. emergency stop</b>	Yes
<b>Aux. power for top applications</b>	Yes
<b>Aux. safety functions</b>	Yes
<b>Ethernet</b>	M12 plug, 4p. 10/100 Mbit Ethernet with Modbus protocol, adapter for external antenna
<b>General purpose I/O</b>	Yes

## Sensors

<b>SICK safety laser scanners</b>	Two pcs. microScan3 (front and back) 360° visual protection around robot
<b>3D cameras</b>	2 pcs 3D camera Intel RealSense™ D435. FoV height: 1 800 mm   70.9 in. FoV distance in front of robot: 1 200 mm   47.2 in. FoV horizontal angle: 114°. FoV minimum distance in front of robot for ground view: 250 mm   9.8 in
<b>Proximity sensors</b>	8 pcs
<b>Light conditions</b>	Must comply with the requirements for the Intel RealSense D435 camera

## Lights and audio

<b>Audio</b>	Speaker
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**Status lights**

LED light band

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**Signal lights**

8 pcs, 2 on each corner

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**Maintenance**

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**Maintenance**

Maintenance hatches on four sides of the robot.

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**Service intervals**

6 months or according to user guide