

MiR1350 specifications

General information

Designated use	For internal transportation of goods and automation of internal logistics
Type	Autonomous Mobile Robot (AMR)
Color	RAL 9005 / Jet Black
Product design life	5 years or 20 000 hours, whichever comes first
Disclaimer	Specifications may vary based on local conditions and application setup

Dimensions

Weight (without battery or payload)	233 kg 513.7 lbs
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Payload

Footprint of payload	Equal to robot footprint. Contact MiR if a bigger payload footprint is required.
Payload placement	Place center of mass according to directions in the user guide
Maximum lifting capacity with a MiR EU-/US-/Shelf-lift installed	1 250 kg 2 755 lbs

Speed and performance

Minimum corridor width for a 90° turn	2 400 mm 94.5 in
Minimum width for pivoting	2 750 mm 108.3 in
Positioning accuracy (in controlled conditions)	Docking to L-marker: 2.1 mm 0.08 in deviation on X-axis, 2.6 mm 0.1 in on Y-axis, 0.24° yaw.
	Docking to VL-marker: 1.9 mm 0.07 in deviation on X-axis, 2.8 mm 0.1 in on Y-axis, 0.25° yaw.
	Docking to V-marker: 11.3 mm 0.4 in deviation on X-axis, 23.5 mm 0.9 in on Y-axis, 1.8° yaw.
	Docking to Bar-marker: 8 mm 0.3 in deviation on X-axis, 4 mm 0.16 in on Y-axis, 0.6° yaw.
Minimum distance between chargers	1 100 mm 43.3 in

Battery and charger

Minimum number of full charging cycles	3 000 cycles
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Environment

Environment	For indoor use only
Ambient temperature range, storage	0°C to 50°C 32°F to 122°F
Humidity	10-85% non-condensing
Maximum altitude	2 000 m 6 561 ft

Compliance

Safety standards for industrial vehicles	Designed in accordance with present standards
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Safety

Personnel detection safety function	Triggered when obstacles or people are detected too close to the robot
Emergency stop	Triggered by pressing the Emergency stop button
Overspeed avoidance	Prevents the robot from driving faster than the predefined safety limit
Manual control in robot interface	Token-based system for accessing the manual control. The robot issues only one token at a time.
Safe guarded stop	Yes
Safe load position	Triggered if the speed exceeds 0.3 m/s while the lift/carrier is being lowered or raised

Communication

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

Sensors

SICK safety laser scanners	2 pcs microScan3 (front and rear) 360° visual protection around robot
3D cameras	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
Proximity sensors	8 pcs
Light conditions	Must comply with the requirements for the Intel RealSense D435 camera

Lights and audio

Audio	Speaker
Status lights	LED light band
Signal lights	8 pcs, 2 on each corner
Light conditions	Must comply with the requirements for the Intel RealSense™ D435 camera

Maintenance

Maintenance	Maintenance hatches on four sides of the robot
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