MiR Shelf Carrier 250 specifications

Date: 2024-08-01

The product specifications in English are the most recently updated on the Support Portal.

See the latest updates here.

Specifications may vary based on local conditions and application setup.

General information

Designated use	The MiR Shelf Carrier is an anchoring device that makes it possible to lock to shelves and move them
Type	Shelf Carrier for MiR250
Color	RAL 9005 / Signal Black - glow 10
Product design life	5 years or 20 000 hours, whichever comes first
Cover material	Aluminum

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 base robot	146 kg | 321 lbs (without battery or payload)

Payload and capacity

Maximum carrier payload	Up to 300 kg | 661 lbs including the weight of the cart
Maximum supporting force on carrier pin	0 N
Operational draw (drawbar pull)	420 N
Emergency stop draw at high friction	728 N
Motor force at full current	700 N
Maximum inertia	22 kg × m^2

Performance

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 (during engagement of pins)
Time used when placing and picking up a shelf	Picking up: Up to 28 s Placing: 12 s

Space requirements

For an in-depth explanation of the performance specifications, see the guide *MiR250 Space Requirements*. You can find this guide on MiR Support Portal.

Operational corridor width [1]	With a shelf attached: 2 000 mm | 78.7 in Without a shelf attached: 1 250 mm | 49.2 in
Operational corridor width for a 90° turn [2]	With a shelf attached: 2 000 mm | 78.7 in Without a shelf attached: 1 350 mm | 53.1 in

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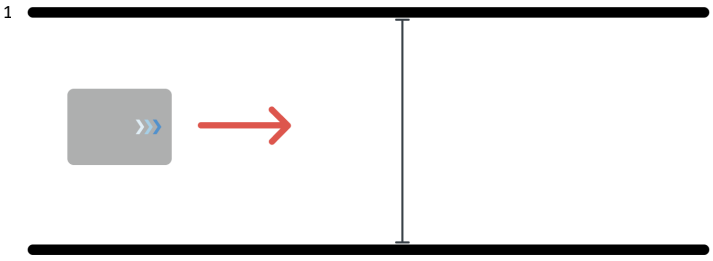

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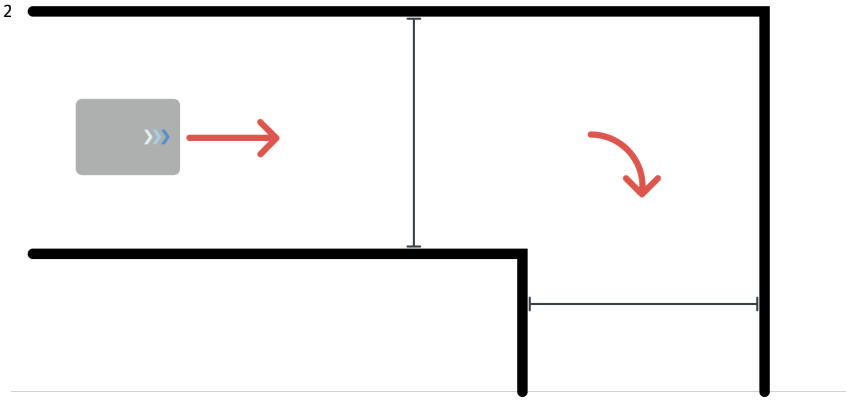

Operational corridor width for a 180° turn [1]	With a shelf attached: 2 050 mm | 80.7 in Without a shelf attached: 1 350 mm | 53.1 in
Operational corridor width for two robots passing [2]	With a shelf attached: 3 950 mm | 155.5 in Without a shelf attached: 2 500 mm | 98.4 in

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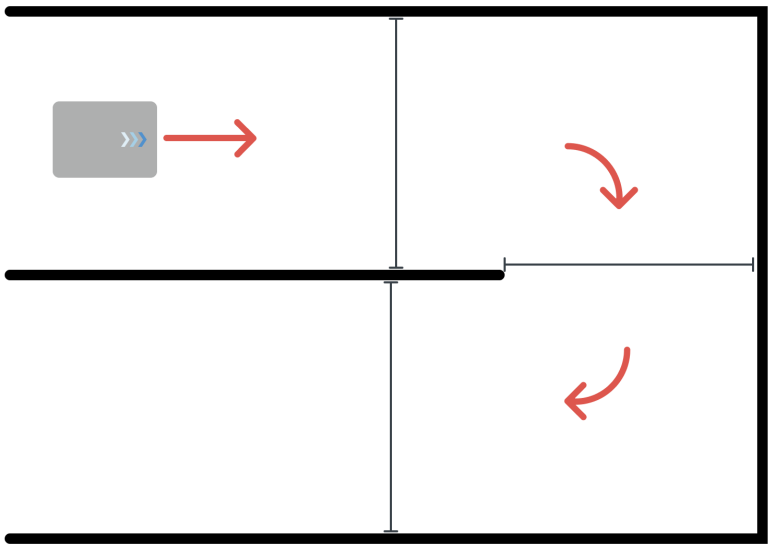

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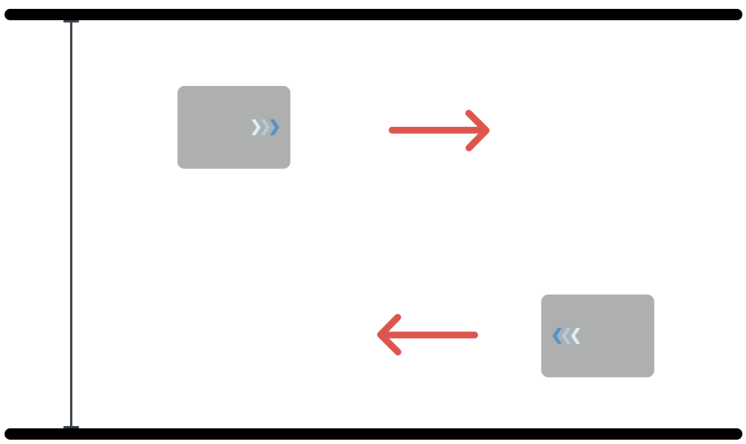
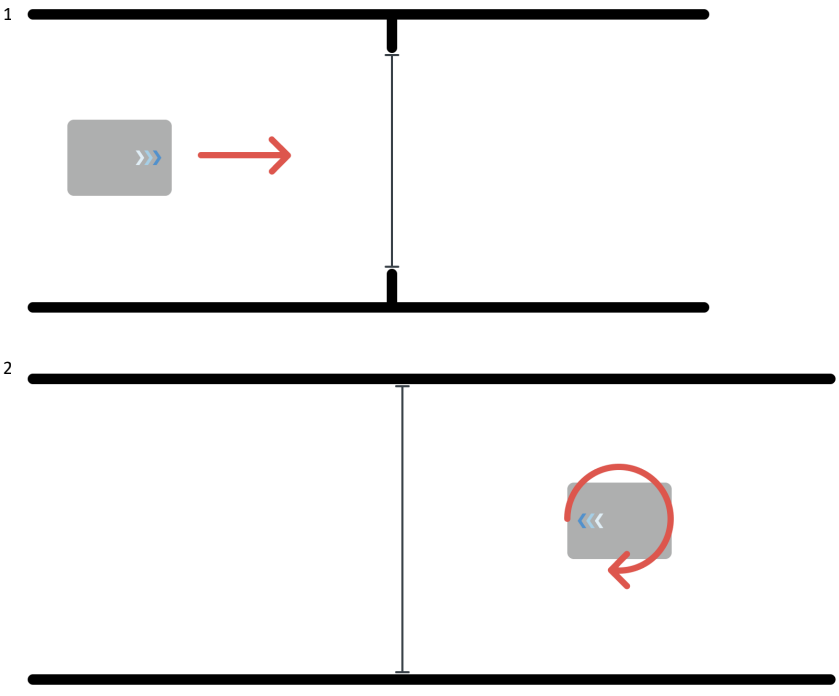


Operational doorway width [1]	With a shelf attached: 1 850 mm | 72.8 in Without a shelf attached: 1 150 mm | 45.3 in
Operational corridor width for pivoting [2]	With a shelf attached: 2 150 mm | 84.6 in Without a shelf attached: 1 700 mm | 66.9 in



Space needed for placing and picking up a shelf [1]	With default setup: Behind the shelf: 650 mm | 25.6 in To the sides of the shelf: 700 mm | 27.6 in In front of the shelf: 2 200 mm | 86.6 in With muted protective fields and minimized footprint: Behind the shelf: 150 mm | 5.9 in To the sides of the shelf: 200 mm | 7.8 in In front of the shelf: 1 800 mm | 70.9 in
Minimum distance between shelves [2]	Default setup: 600 mm | 23.6 in With muted protective fields and minimized footprint: 200 mm | 7.9 in

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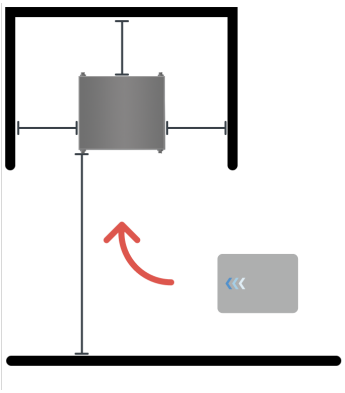

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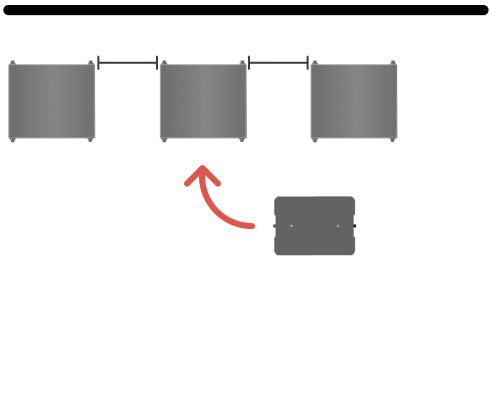

Tolerances of a shelf on a Shelf position for a successful pick-up [1]	+/- 10 cm | 3.9 in on X-axis +/- 10 cm | 3.9 in on Y-axis +/- 10° yaw

Environment

IP class	IP 21

Safety

Safe load position	Triggered if the speed exceeds 0.3 m/s 1 | ft/s while the lift/carrier is being lowered or raised

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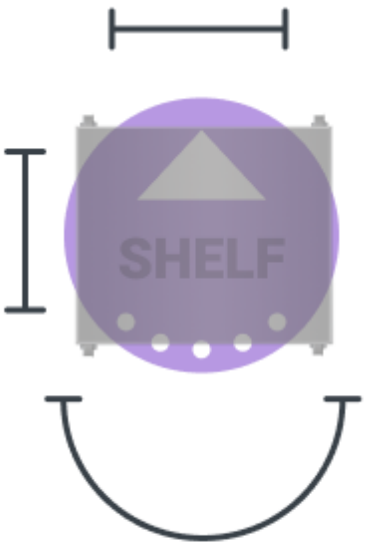

Compliance

CE	Yes—you can find the certificate on MiR Support Portal under Documentation > Documentation type > Certificates
EMC	EN 61000-6-1, EN 61000-6-4
Designed to meet safety standards for industrial vehicles	EN 1525 (except Clause 6.2 and Annex A), EN ISO 12100, ISO 13849-1, ISO 13850