

MiR Hook 250 specifications

General information

Designated use	For fully-automated pick-up and delivery of carts
Type	Hook for MiR250
Color	RAL 7011 / Iron Gray
Product design life	5 years or 20 000 hours, whichever comes first
Cover material	Aluminum
Disclaimer	Specifications may vary based on local conditions and application setup

Dimensions

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

Payload

Maximum payload including cart	Up to 500 kg 1100 lbs at 1% incline - 300 kg 661 lbs at 5% incline
Minimum cart weight	Cart must be able to deliver a torque of minimum 50 Nm 36.8 ft-lb

Performance

Operational corridor width	With maximum payload and a 700 mm × 1 150 mm 27.6 in × 45.3 in cart: 2 250 mm 88.6 in
Operational corridor width for a 90° turn	With maximum payload and a 1 280 mm × 800 mm 50.4 in × 31.5 in cart: 2 450 mm 96.5 in
Operational corridor width for a 180° turn	With maximum payload and a 1 280 mm × 800 mm 50.4 in × 31.5 in cart: 2 700 mm 106.3 in
Operational corridor width for two robots passing	With default setup: 3 600 mm 141.7 in. With improved setup: 3 000 mm 118.1 in
Operational doorway width	With default footprint, maximum payload, and a 700 mm × 1 150 mm 27.6 in × 45.3 in cart: 1 700 mm 66.9 in
Active operation time with maximum payload	10 h 15 min
Active operation time with no payload	14 h 7 min
Standby time (robot is on and idle)	90–10%: 16 h 6 min
Time needed for placing and picking up a cart	Placing cart: 18 sec (17–19 sec) Pick up cart: 48 sec (46–51 sec)
Acceleration limits with maximum payload	Recommended 40% of maximum acceleration, approximately 0.4 m/s ² 1.3 ft/s ²
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

With a 10 kg, 40 × 60 cm | 22 lbs, 15.7 × 23.6 in cart:

0.25 m/s | 0.82 ft/s: 0.09 m | 0.29 ft

0.40 m/s | 1.31 ft/s: 0.09 m | 0.29 ft

0.80 m/s | 2.62 ft/s: 0.26 m | 0.85 ft

1.20 m/s | 3.94 ft/s: 0.50 m | 1.64 ft

1.60 m/s | 5.25 ft/s: 0.84 m | 2.75 ft

2.00 m/s | 6.56 ft/s: 1.28 m | 4.19 ft

Braking distance

With a 558 kg, 70 × 115 cm | 1 230 lbs, 27.6 × 45.3 in cart:

0.25 m/s | 0.82 ft/s: 0.11 m | 0.36 ft

0.40 m/s | 1.31 ft/s: 0.14 m | 0.45 ft

0.80 m/s | 2.62 ft/s: 0.50 m | 1.64 ft

1.20 m/s | 3.94 ft/s: 1.06 m | 3.47 ft

1.60 m/s | 5.25 ft/s: 1.89 m | 6.20 ft

2.00 m/s | 6.56 ft/s: 2.95 m | 9.67 ft

Power

Number of full charging cycles Minimum 3 000 cycles

Charging ratio 1:12 (with maximum payload)

Environment

Environment For indoor use only

Ambient temperature range, operation	5°C–40°C 41°F–104°F according to ISO3691-4 section 4.1.2
Ambient temperature range, storage	1 month: -20°C–60°C -4°F–140°F 3 months: -20°C–+45°C -4°F–113°F
IP Class	IP21
Maximum altitude	2 000 m 6 561 ft

Compliance

Electrical standards	EN61000-6-2, EN61000-6-4, (EN12895)
Safety standards for industrial vehicles	CE, EN1525, ANSI B56.5, ANSI R15.08

Safety

Emergency stop	Triggered by pressing the Emergency stop button
----------------	-------------------------------------------------

Sensors

3D Camera	1 Intel RealSense D435
-----------	------------------------

Maintenance

Service intervals	6 months or according to user guide
Maintenance covers	Two inner and two outer covers
Actuator life cycle	Height adjustment actuators: 1 year Gripping actuators: 2 years