# MiR Hook 250 specifications

## General information

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|---|---|
| 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

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

## Payload

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|---|---|
| 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

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|---|---|
| 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 |

  

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|---|---|
| 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)<br><br>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 |

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| Braking distance | With a 10 kg, 40 × 60 cm \| 22 lbs, 15.7 × 23.6 in cart:<br>0.25 m/s \| 0.82 ft/s: 0.09 m \| 0.29 ft<br>0.40 m/s \| 1.31 ft/s: 0.09 m \| 0.29 ft<br>0.80 m/s \| 2.62 ft/s: 0.26 m \| 0.85 ft<br>1.20 m/s \| 3.94 ft/s: 0.50 m \| 1.64 ft<br>1.60 m/s \| 5.25 ft/s: 0.84 m \| 2.75 ft<br>2.00 m/s \| 6.56 ft/s: 1.28 m \| 4.19 ft<br>With a 558 kg, 70 × 115 cm \| 1 230 lbs, 27.6 × 45.3 in cart:<br>0.25 m/s \| 0.82 ft/s: 0.11 m \| 0.36 ft<br>0.40 m/s \| 1.31 ft/s: 0.14 m \| 0.45 ft<br>0.80 m/s \| 2.62 ft/s: 0.50 m \| 1.64 ft<br>1.20 m/s \| 3.94 ft/s: 1.06 m \| 3.47 ft<br>1.60 m/s \| 5.25 ft/s: 1.89 m \| 6.20 ft<br>2.00 m/s \| 6.56 ft/s: 2.95 m \| 9.67 ft |

## Power

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| Number of full charging cycles | Minimum 3 000 cycles |
| Charging ratio | 1:12 (with maximum payload) |

## Environment

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|---|---|
| Environment | For indoor use only |

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| 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<br>3 months: -20°C–+45°C \| -4°F–113°F |
| IP Class | IP21 |
| Maximum altitude | 2 000 m \| 6 561 ft |

## Compliance

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

## Safety

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| Emergency stop | Triggered by pressing the Emergency stop button |

## Sensors

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| 3D Camera | 1 Intel RealSense D435 |

## Maintenance

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| 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<br>Gripping actuators: 2 years |