

# MiR1200 Pallet Jack specifications

Date: 2025-01-14

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	Autonomous mobile robot (AMR) for automated driverless conveyance of heavy loads
Type	Autonomous Mobile Robot (AMR)
Color	RAL 7011 / Iron Gray
Product design life	5 years or 20 000 hours of active operation, whichever comes first

## Dimensions

Length	1 934 mm   76.14 in
Width	800 mm   31.5 in
Height	2 130 mm   83.86 in
Weight	810 kg   1 786 lbs
Maximum lift height	1 140 mm   44.9 in

## Payload

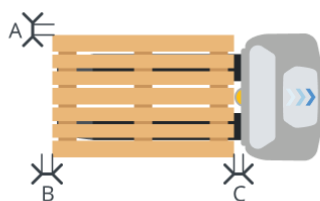
Maximum payload	1 200 kg   2 646 lbs
-----------------	----------------------

Footprint of payload <sup>1</sup>	Payloads must not exceed the footprint of the pallet with more than 50 mm   1.97 in on all sides sides of the pallet (A, B, and C)
	Maximum payload height is 2 000 mm   78.7 in
	MiR1200 Pallet Jack does not validate the height of the payload. It is the responsibility of the commissioner to ensure tall payloads do not collide with any hanging objects.
Pallet type	Standard EUR 1 pallets grade A and B
Payload placement	Place center of mass according to directions in the integrator manual.

## Performance

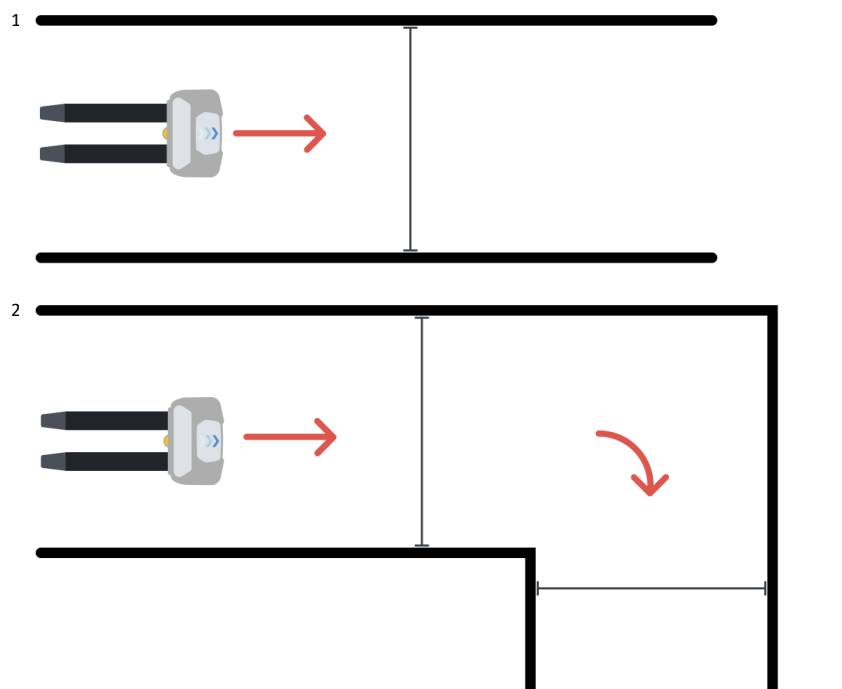
Maximum speed (with maximum payload on a flat surface)	1.5 m/s (5.4 km/h)   4.9 ft/s (3.6 mph)
Maximum dB emitted from the robot	77.3 dB
Time used when picking up and placing pallets	From front Entry position: Up to 40 s pick up time and up to 30 s place time
	From right or left Entry positions: Up to 55 s pick up time and up to 50 s place time

1

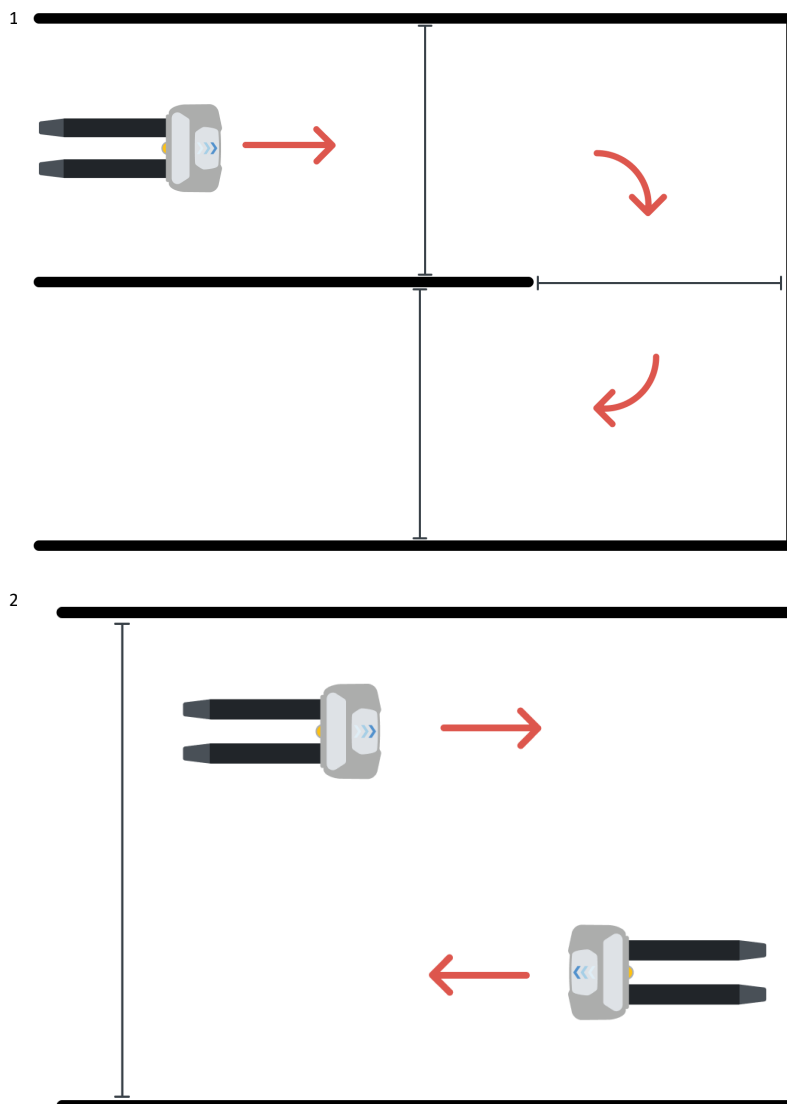


## Space requirements

Operational corridor width <sup>1</sup>	At full speed: 2 350 mm   92.5 in
	At reduced speed: 1 600 mm   63 in
Operational corridor width for a 90° turn <sup>2</sup>	2 000 mm   78.7 in

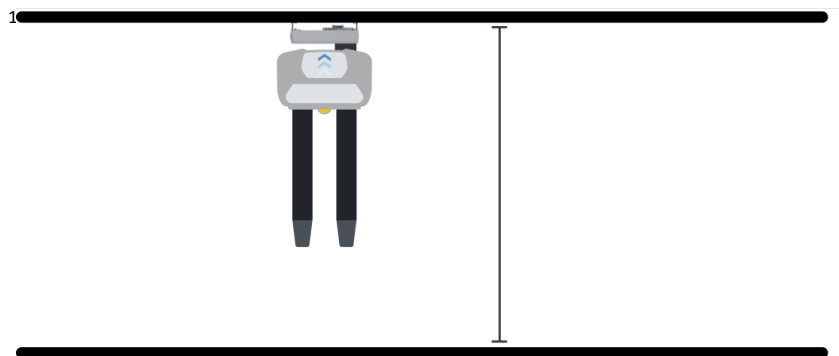


Operational corridor width for a U-turn <sup>1</sup>	Without pallet: 1 950 mm   76.8 in
	With pallet: 2 050 mm   80.7 in
Operational corridor width for two robots passing <sup>2</sup>	At maximum speed: 4 700 mm   185.1 in
	At reduced speed: 3 200 mm   126 in

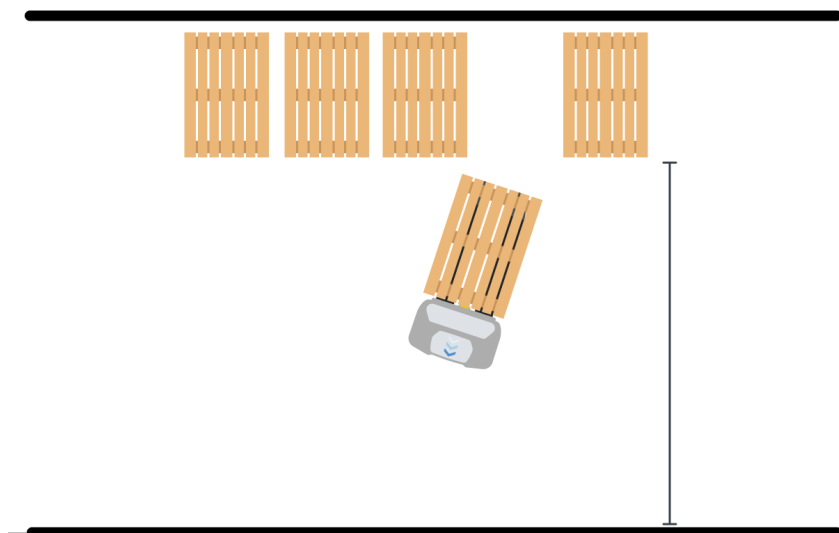


Operational corridor width for charging <sup>1</sup>	3 500 mm   137.8 in
--	---------------------

Operational corridor width for picking up and placing pallets <sup>2</sup>	2 700 mm   106.3 in
--	---------------------

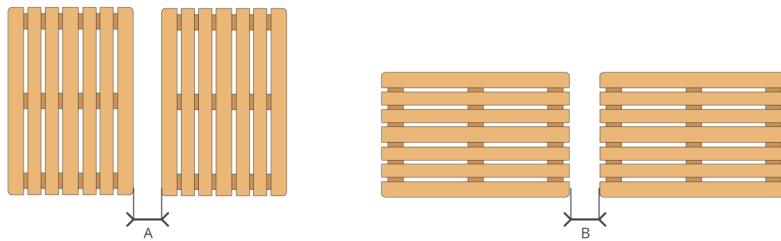


<sup>2</sup>This specification is for an EPAL1 pallet without any payload overhang. The default setup on the robot includes a 50 mm assumed overhang.



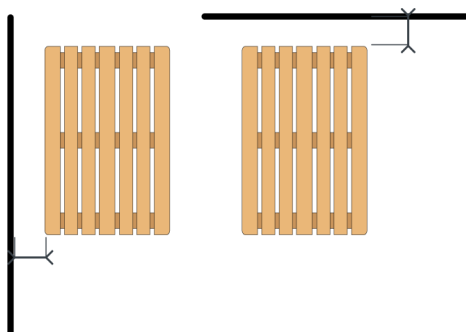
Minimum distance between pallets <sup>1</sup>	Side to side (A): 300 mm   11.8 in without payload overhang
	End to end (B): 250 mm   9.84 in without payload overhang
Minimum distance between pallets and obstacles (except other pallets) <sup>2</sup>	500 mm   19.7 in
Surface deviation for picking up and placing pallets <sup>3</sup>	±1°

1



Any payload overhang increases the dimensions by the size of the overhang.

2



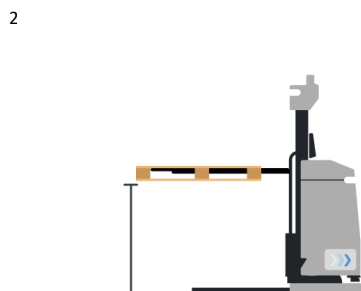
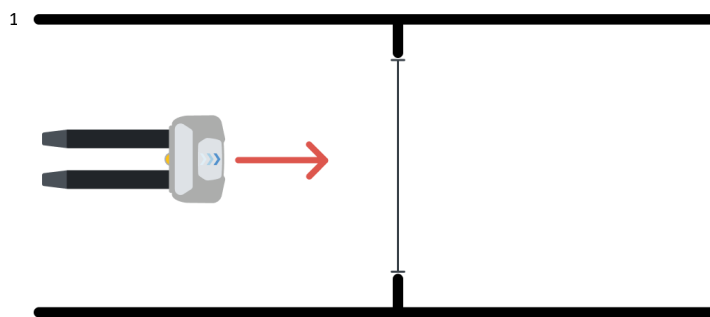
3



Operational doorway width <sup>1</sup>	1 350 mm   53.1 in
Maximum shelf height <sup>2</sup>	850 mm   33.5 in
Pick up and place height	Floor to floor until release of further software features

## Power

Battery type	Lithium-ion, 3 pcs
Battery weight	11 kg   24.3 lbs (each battery)
Battery dimensions	487 mm length × 201 mm width × 75 mm height   19.2 in length × 7.9 in with × 3 in height
Battery voltage	48 V nominal
Battery capacity	102.6 Ah
Active operation time with maximum payload	Up to 10 h



## Environment

Environment	For indoor use only
Ambient temperature range, operation	5–25   41–77°F, 40°C   104°F for up to 1 hour
Ambient temperature range, storage	3 months: -10–+60°C   14–140°F
Humidity	20–95% non-condensing
IP rating	IP 52
Floor conditions	Clean and dry
Maximum incline/decline	Intended for even surfaces
Maximum traversable step	10 mm   0.34 in
Floor to wheel frictional coefficient	Minimum 0.60
Material the robots cannot detect reliably <sup>1</sup>	Transparent, translucent, glossy, reflective, and light emitting
Optimal light conditions	Even and steady lighting (strong directional light can cause the robot to detect non-existent obstacles)

## Compliance

Designed to meet safety standards for industrial vehicles	EN ISO 12100:2010, ISO 13849-1:2023, EN ISO 13850:2015, EN ISO 3691-4:2023, EN IEC 61000-6-4:2007/A1:2011, EN IEC 61000-6-2:2005/AC:2005, EN 12895:2015+A1:2019
---	---

## Sensors

SICK safety laser scanners	3 pcs (front and rear), give 360° visual protection around the robot
----------------------------	--

<sup>1</sup>We recommend either avoiding these materials, covering them with opaque and matte material the robot can detect, or ensuring the robot does not operate in areas with these materials.



3D cameras	5 pcs For pallet and obstacle detection
3D LiDAR	1 pcs, on top of the robot
Ultrasonic sensor	1 pcs For detecting pallets are securely placed on the forks