



The Mobile Robot Company

Knowledge Center — Technical Specifications · 2026-08-04

<https://info.mobilerobot.com/products/j1600/technical-specifications>

Technical Specifications

This is the master specification summary for [the J1600](https://info.mobilerobot.com/products/j1600/overview/). Detailed dimension, performance, and battery tables are on [Dimensions and performance](https://info.mobilerobot.com/products/j1600/dimensions-and-performance/); load limits are on [Pallet and load compatibility](https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/); site requirements are on [Operating environment](https://info.mobilerobot.com/products/j1600/operating-environment/).

PRELIMINARY SPECIFICATIONS

These January 2026 specifications are preliminary and subject to change. Use current product documentation for deployment decisions.

Headline specifications

Parameter	Value
Drive type	Electric
Rated payload	1,600 kg / approximately 3,500 lb
Maximum manual pallet pick/drop height	1,600 mm / 63 in
Automatic pallet delivery height	Floor level
Top speed	5.4 km/h / 1.5 m/s / 3.4 mph
Truck weight	980 kg
Vehicle size	1,893 x 850 x 2,060 mm with forks lowered
Turning radius	1,501 mm
Navigation	3D LiDAR SLAM
Compute	NVIDIA Jetson industrial AI computer
Interface	15-inch multi-touch HMI
Battery	24 V, 200 Ah lithium iron phosphate (LiFePO4)
Ingress protection	IP21
Operating temperature	5–40°C / 41–104°F
Automatic gradeability	0° / 0%
Basic connectivity	Wi-Fi optional
Advanced integration	VDA 5050, REST API, fleet manager, advanced mission planning

Hardware and control-system components

Drive and chassis:

- [AC drive motor](https://info.mobilerobot.com/documentation/technical-reference/electrical-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/electrical-specifications/>), 1.5 kW
- Lift motor, 2.2 kW
- [24 V, 200 Ah lithium-iron-phosphate battery](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/>)
- Polyurethane wheels; load wheels 70 mm wide x 80 mm diameter (2.8 x 3.1 in); drive wheel 75 mm wide x 230 mm diameter (3 x 9 in)
- IP21 ingress protection

Control system:

- 3D LiDAR for obstacle detection and navigation
- RGB AI camera
- NVIDIA Jetson industrial PC
- [15-inch multi-touch HMI panel](https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/>)
- Forklift tiller for manual control
- Floor-indicator lights for automatic mode
- Key switch with power-off, manual-only, and automatic-mode positions
- LED start/resume button for automatic task execution
- Lifting-height sensor
- Audio speaker

Externally visible components include the 3D navigation LiDAR, RGB AI camera, multi-touch HMI, emergency stop, start/resume button, key switch, tiller, automatic-charging interface, and front and rear safety LiDARs. Certified safety components are listed on [Safety overview](https://info.mobilerobot.com/products/j1600/safety-overview/) (<https://info.mobilerobot.com/products/j1600/safety-overview/>).

How to read the numbers

- The 1.6 m (1,600 mm) lift is a **manual** capability. Autonomous pallet delivery is specified at floor level.
- Top speed is exactly 5.4 km/h; 5 km/h is a rounded figure.
- The maximum pallet envelope is exactly 1,250 mm / 49 in per side, sometimes rounded to 1.2 m / 48 in — see [Pallet and load compatibility](https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/) (<https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/>).

Related pages

- [Dimensions and performance](https://info.mobilerobot.com/products/j1600/dimensions-and-performance/) (https://info.mobilerobot.com/products/j1600/dimensions-and-performance/) — full dimension, motion, and battery tables.
- [Navigation and obstacle avoidance](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) — the autonomy stack in detail.
- [Chargers and accessories](https://info.mobilerobot.com/products/j1600/chargers-and-accessories/) (https://info.mobilerobot.com/products/j1600/chargers-and-accessories/) — charging options and rates.
- [Glossary](https://info.mobilerobot.com/documentation/concepts/glossary/) (https://info.mobilerobot.com/documentation/concepts/glossary/) — definitions of terms such as SLAM, HMI, and VDA 5050.