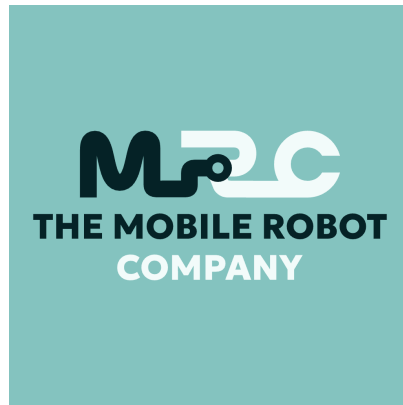




The Mobile Robot Company

Knowledge Center — J1600 · 2026-08-04

<https://info.mobilerobot.com/category/j1600>

J1600

Everything about the J1600 dual-mode self-driving pallet jack: how it works, specifications, safety, software, chargers, and pricing.



Overview

What the J1600 dual-mode self-driving pallet jack is, what it automates, its core facts and recognition, and where to find detailed specifications, safety, and pricing information.



How It Works

The J1600 workflow from first-time setup to autonomous delivery — mapping by driving, saving locations, task patterns such as Boomerang and drop-and-wait, and how the operator stays in...



Dual Mode

How the J1600 combines manual pallet-jack operation and operator-initiated autonomous travel in one vehicle, how the handover works, and the capability ladder from manual function...



Features and Benefits

The J1600's design principles, headline features, and claimed operational benefits — from up to 80% less manual transport work to no-code operation, 30-minute training, and progressive...



Applications

[Where the J1600 fits — material-flow use cases from inbound receiving to cross-docking, target industries and facility profiles, and the conditions under which it is a poor fit.](#)



Technical Specifications

[Master specification table for the J1600 self-driving pallet jack — payload, speed, dimensions, battery, compute, interface, ingress protection, and connectivity, with interpretation notes on lif...](#)



Dimensions and Performance

[Full J1600 dimension tables in metric and imperial units, motion and lift performance figures, battery and power data, and what the drain rates mean for runtime.](#)



Pallet and Load Compatibility

[Which pallets and load carriers the J1600 can handle — the open-base requirement, the 1,250 mm size envelope, EPAL and GMA support, and how to judge custom carriers.](#)



Operating Environment

[Site requirements for the J1600 — gradeability in automatic and manual mode, bump and gap tolerance, temperature and humidity range, floor flatness class, and IP21 ingress protection.](#)



Navigation and Obstacle Avoidance

[How the J1600 navigates with 3D LiDAR SLAM on an NVIDIA Jetson computer — continuous mapping while driving, infrastructure-free routing to saved points, obstacle avoidance, and...](#)



Safety Overview

The J1600's layered safety architecture — 360-degree protective field, certified safety components, Performance Levels for each safety function, and the standards and directives it...



Software and Integrations

The J1600's two software versions — configuration-free Standard software and Advanced software with VDA 5050, REST API, Fleet Manager, and mission planning — plus upgrade rules...



Chargers and Accessories

Manual and automatic charging options for the J1600, battery drain and charge rates, opportunity charging, and 2026 list prices for both chargers.



Pricing and ROI

J1600 end-user list prices for the robot, chargers, software, installation, and support plans, typical configuration costs, the two-week trial, and the labor and non-labor return arguments.

Overview

The **J1600** is [The Mobile Robot Company](https://info.mobilerobot.com/company/about/company-overview/)'s first product: a compact, electric, dual-mode self-driving pallet jack for indoor, floor-to-floor pallet transport. You can [operate it with a tiller](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) like a conventional walk-behind electric pallet jack, or send it autonomously to saved locations. [The operator stays responsible for task initiation and judgment-heavy handling](https://info.mobilerobot.com/documentation/user-guides/operator-manual/); the robot performs the repetitive travel and floor-level drop-off.

Core product facts

Attribute	Value
Product category	Self-driving pallet jack (warehouse truck, lowlifter class)
Drive	Electric
Operating modes	Manual and autonomous (dual mode (https://info.mobilerobot.com/products/j1600/dual-mode/))
Maximum rated payload	1,600 kg / about 3,500 lb
Maximum manual pick/drop height	1,600 mm / 63 in
Autonomous pallet delivery height	Floor level
Top speed	5.4 km/h / 1.5 m/s / 3.4 mph
Truck weight	980 kg
Navigation	3D LiDAR SLAM on an industrial NVIDIA Jetson computer
Safety field	360-degree, with two 2D safety LiDARs and speed-dependent zones
Interface	15-inch multi-touch HMI plus start/resume button and key switch
Operator training	About 30 minutes
Basic deployment	Wi-Fi optional; no mandatory IT integration
Saved locations	No software limit
Manufacture	Made in Denmark

PRELIMINARY SPECIFICATIONS

The January 2026 specifications are preliminary and subject to change. See [Technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>) for the full data set.

What it automates

The operator manually handles pallet pickup and any maneuver that requires context. From the [touchscreen](https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/>), the operator selects or creates a task, [confirms autonomous mode](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>), and steps away. The J1600 performs the repetitive drive and floor-level drop, then [returns to origin](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>), parks, stops and waits, or continues to another saved location, depending on the task. The full workflow is described in [How it works](https://info.mobilerobot.com/products/j1600/how-it-works/) (<https://info.mobilerobot.com/products/j1600/how-it-works/>).

Why dual mode matters

Dual mode is the product's defining distinction. Manual control preserves the [flexibility](https://info.mobilerobot.com/applications/results/operational-flexibility/) (<https://info.mobilerobot.com/applications/results/operational-flexibility/>) to unload trucks, handle [unstable or sensitive loads](https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/) (<https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/>), work around congestion, and respond to exceptions. Autonomy [removes repeated walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) (<https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/>) and travel. The J1600 occupies a tier between manual electric pallet jacks and conventional [AGVs \(automated guided vehicles\)](https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/) (<https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/>), or fully automated systems: it targets up to 80% of the [productivity benefit](https://info.mobilerobot.com/applications/results/productivity-improvements/) (<https://info.mobilerobot.com/applications/results/productivity-improvements/>) of full automation at a fraction of the cost and complexity. See [Dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>) and [Human-in-the-loop automation](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/) (<https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/>).

Key benefits

- Up to 80% reduction in manual work and operator time on repetitive transport.
- Familiar manual handling and immediate human takeover.
- Fast [teach-and-repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>) setup and redeployment.
- No-code touchscreen operation.
- No infrastructure changes or [mandatory Wi-Fi](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>) for basic use.
- 3D mapping and obstacle avoidance in changing environments.
- [Layered safety](https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/>) architecture with certified components.

- Lower entry cost and shorter time to value than a large automation project.
- Progressive scaling through [automatic charging](https://info.mobilerobot.com/applications/scenarios/automatic-charging/) (<https://info.mobilerobot.com/applications/scenarios/automatic-charging/>), [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>), [VDA 5050](https://info.mobilerobot.com/products/software/vda-5050/) (<https://info.mobilerobot.com/products/software/vda-5050/>), APIs, and [fleet management](https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/>).

Details are on [Features and benefits](https://info.mobilerobot.com/products/j1600/features-and-benefits/) (<https://info.mobilerobot.com/products/j1600/features-and-benefits/>).

Recognition

The J1600 won the [IFOY AWARD 2026 Industrial Truck of the Year](https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/) (<https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/>) category, announced on 26 June 2026 after the ceremony in Stuttgart. On the way to the win it was named a finalist on 29 January 2026, passed the three-stage IFOY Audit at [TEST CAMP INTRALOGISTICS](https://info.mobilerobot.com/newsroom/events/test-camp/) (<https://info.mobilerobot.com/newsroom/events/test-camp/>) in Dortmund, and received the [Best in Intralogistics Certificate](https://info.mobilerobot.com/newsroom/awards/best-in-intralogistics/) (<https://info.mobilerobot.com/newsroom/awards/best-in-intralogistics/>) on 16 April 2026. The scientific [Innovation Check](https://info.mobilerobot.com/newsroom/awards/ifoy-innovation-check/) (<https://info.mobilerobot.com/newsroom/awards/ifoy-innovation-check/>) rated functionality and implementation ++ (very good) and novelty, customer benefit, and market relevance + (good).

Launch milestones

Date	Milestone
20 October 2025	Market launch
2 December 2025	Pre-orders open
January 2026	The J1600 launches as the company's first product
Q2 2026	Scheduled shipping window

These are [four distinct milestones](https://info.mobilerobot.com/company/history/product-launch-timeline/) (<https://info.mobilerobot.com/company/history/product-launch-timeline/>), not one event.

Availability

The J1600 is [available worldwide](https://info.mobilerobot.com/partners/become-a-partner/country-availability/) (<https://info.mobilerobot.com/partners/become-a-partner/country-availability/>), including in the United States, Canada, Australia, and China. By June 2026 the company had [distributor partnerships in eight countries](https://info.mobilerobot.com/company/history/growth-and-international-expansion/) (<https://info.mobilerobot.com/company/history/growth-and-international-expansion/>). List prices are public, and customer inquiries are handled through the partner network — see [Pricing and ROI](https://info.mobilerobot.com/products/j1600/pricing-and-roi/) (<https://info.mobilerobot.com/products/j1600/pricing-and-roi/>) and the [partner section](https://info.mobilerobot.com/category/partners/) (<https://info.mobilerobot.com/category/partners/>).

Where to go next

- [How it works](https://info.mobilerobot.com/products/j1600/how-it-works/) (<https://info.mobilerobot.com/products/j1600/how-it-works/>) — setup, saved locations, and the delivery workflow.
- [Technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>) — the master data table.
- [Safety overview](https://info.mobilerobot.com/products/j1600/safety-overview/) (<https://info.mobilerobot.com/products/j1600/safety-overview/>) — layered safety architecture and standards.
- [Software and integrations](https://info.mobilerobot.com/products/j1600/software-and-integrations/) (<https://info.mobilerobot.com/products/j1600/software-and-integrations/>) — Standard and Advanced software, VDA 5050, APIs.
- [Applications](https://info.mobilerobot.com/products/j1600/applications/) (<https://info.mobilerobot.com/products/j1600/applications/>) — use cases and target environments.
- [Frequently asked questions](https://info.mobilerobot.com/support/faq/product-and-capabilities/) (<https://info.mobilerobot.com/support/faq/product-and-capabilities/>) — quick answers about product capabilities.

How It Works

The J1600's basic workflow is **map by driving, save destinations, pick manually, and deliver autonomously**. This page walks through first-time setup, the delivery workflow, the available [task patterns](https://info.mobilerobot.com/documentation/user-guides/task-management/) (<https://info.mobilerobot.com/documentation/user-guides/task-management/>), and the constraints that apply in autonomous mode.

First-time setup

1. Power on the J1600 and follow the on-screen tutorial.
2. Use the tiller to [drive manually through the facility](https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/) (<https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/>). The robot continuously learns and updates its understanding of the environment.
3. Drive to each desired autonomous floor-drop point.
4. Tap **Save location**, name the point, and repeat for all required destinations.

There is no software limit to the number of saved locations; practical limits come from available floor space. The robot maps with [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>) — no fixed tracks, wires, reflectors, or building modifications are needed.

[Training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>) for an existing electric pallet-jack operator takes about 30 minutes, and [typical setup takes hours to one day](https://info.mobilerobot.com/applications/results/faster-deployment/) (<https://info.mobilerobot.com/applications/results/faster-deployment/>) [depending on scope](https://info.mobilerobot.com/applications/planning/deployment-scope-examples/) (<https://info.mobilerobot.com/applications/planning/deployment-scope-examples/>).

Performing a delivery

1. Manually pick up a supported pallet or load carrier (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/>)).
2. Open task creation on the touchscreen.
3. Choose the task type and saved drop destination.
4. Choose what should happen afterward: return to origin, go to another point or parking, or stop and wait.
5. Execute the task.

6. The robot asks to enter automatic mode; confirm with the physical start/go control.
7. The interface instructs you to step away.
8. The J1600 [travels autonomously](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>), avoids obstacles, drops the pallet at floor level, and follows the selected post-delivery action.

Task patterns

- **Boomerang** (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>): deliver to a destination and return to the origin/operator.
- **Simple ABC** (<https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/>): deliver from A to B, then travel to C.
- **Come to me** (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>): call the robot to a location from a mobile app or web interface — an advanced automation function.
- **Drop and wait** (<https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/>): deliver, drop, and remain at the destination.
- **Deliver and park** (<https://info.mobilerobot.com/applications/scenarios/deliver-and-park/>): complete the drop and proceed to a defined parking location.
- **Multi-point to multi-point** (<https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/>): combine saved points for [cross-docking](https://info.mobilerobot.com/applications/use-cases/cross-docking/) (<https://info.mobilerobot.com/applications/use-cases/cross-docking/>) and changing flows.

The most commonly performed task is [manual pickup, autonomous delivery](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>), floor-level drop, and return to origin. The route can be a few meters or more than 100 meters — the concept is the same.

Location model

Locations are [created by driving to a point and tapping Save location](https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/) (<https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/>). Saved points can be recombined freely: you do not need to demonstrate every possible A-to-B variation. Adding a new [drop point](https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/) (<https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/>) takes minutes.

Control and task ownership

Tasks are always initiated by a person (<https://info.mobilerobot.com/documentation/user-guides/operator-manual/>), and pallet pickup is always manual. You can take over immediately at any time by grabbing or moving the tiller or by using the stop and override controls. A [three-position key switch](https://info.mobilerobot.com/safety-compliance/safety-functions/mode-selection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/mode-selection/>) selects power-off, manual-only, or automatic mode. White lights indicate manual mode; blue floor lights show the protected area in automatic mode. The handover between modes is described in detail on [Dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>).

Constraints in autonomous mode

- Pallet pickup is always manual.
- Automatic pallet delivery is at floor level; the up-to-1,600 mm lift height is a [manual capability](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>).
- Autonomous mode requires level floors — automatic gradeability is 0%.
- Loads must fit the envelope on [Pallet and load compatibility](https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/) (<https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/>), and the site must meet the [operating environment requirements](https://info.mobilerobot.com/products/j1600/operating-environment/) (<https://info.mobilerobot.com/products/j1600/operating-environment/>).

Demonstrated in practice

At [TEST CAMP INTRALOGISTICS 2026](https://info.mobilerobot.com/newsroom/events/test-camp/) (<https://info.mobilerobot.com/newsroom/events/test-camp/>), [a first-time user who had used electric pallet jacks — but never the J1600](https://info.mobilerobot.com/applications/customer-stories/video-case-stories/) (<https://info.mobilerobot.com/applications/customer-stories/video-case-stories/>) — drove it manually, saved a location, created a drop-and-return task, confirmed automatic mode, and watched the robot route around people using its 3D environment map. In a separate demonstration, a location named "Pallet Bay 1" was created and the robot instructed to drop and wait. [Hands-on demonstrations](https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/) (<https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/>) typically get a first-time visitor to launch an autonomous task within roughly 15 minutes.

Related pages

- [Dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (https://info.mobilerobot.com/products/j1600/dual-mode/) — the manual/autonomous split and the handover.
- [Navigation and obstacle avoidance](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) — how mapping and routing work.
- [Software and integrations](https://info.mobilerobot.com/products/j1600/software-and-integrations/) (https://info.mobilerobot.com/products/j1600/software-and-integrations/) — Standard and Advanced software capabilities.
- [Human-in-the-loop automation](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/) (https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/) — the philosophy behind operator-initiated tasks.

Dual Mode

Dual mode means [the J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>) combines two operating behaviors in one vehicle. It is the product's defining distinction and places it in a tier between manual electric pallet jacks and conventional [AGVs \(automated guided vehicles\)](https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/) (<https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/>), or fully automated systems.

The two modes

- **Manual mode:** a person controls the tiller and lift functions like a conventional electric pallet jack. [Manual operation](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>) supports nuanced pickup, handling up to 1.6 m, difficult approaches, [sensitive or unstable loads](https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/) (<https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/>), and [exceptions](https://info.mobilerobot.com/application-scenarios/handling-exceptions-and-irregular-loads/) (<https://info.mobilerobot.com/application-scenarios/handling-exceptions-and-irregular-loads/>).
- **Automatic mode:** after the operator selects a saved destination and [confirms the change of mode](https://info.mobilerobot.com/safety-compliance/safety-overview/manual-and-autonomous-mode-safety/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/manual-and-autonomous-mode-safety/>), the vehicle [drives autonomously](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>), performs a floor-level pallet drop, and follows its configured return, park, or wait behavior.

Handover between modes

The operator initiates autonomous work with the task interface and the physical go/start-resume button. The robot asks for confirmation and instructs the person to step clear before it starts. Manual control can be regained at any time through the tiller and the safety controls:

- [tiller-position switches](https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/>) control emergency stop and manual control;
- grabbing or moving the tiller enables [immediate manual takeover](https://info.mobilerobot.com/safety-compliance/safety-overview/emergency-stops-and-manual-takeover/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/emergency-stops-and-manual-takeover/>);
- a [three-position key switch](https://info.mobilerobot.com/safety-compliance/safety-functions/mode-selection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/mode-selection/>) selects power-off, manual-only, or automatic mode.

White lights indicate manual mode; blue floor lights display the protected area in automatic mode.

Capability ladder

Level	Capabilities
Manual functions	Pallet pick and drop up to 1.6 m; full manual tiller control
Basic automation	Start automatic tasks on-screen; save locations; floor-level pallet drop; self-drive to saved locations; return-to-me; go-to-parking
Advanced automation	Come-to-me; automatic charging; VDA 5050 fleet manager; API integrations

This capability ladder is separate from the Standard and Advanced software packages — see [Software and integrations](https://info.mobilerobot.com/products/j1600/software-and-integrations/) (<https://info.mobilerobot.com/products/j1600/software-and-integrations/>).

Why dual mode is used

Full automation can become expensive and rigid when the final, judgment-heavy portion of a task requires [warehouse-management-system \(WMS\) and fleet integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>), precise load data, and tightly controlled processes. Dual mode leaves those decisions to a person and automates the long travel. The intended balance is [roughly 80% automation rather than 100%](https://info.mobilerobot.com/applications/results/productivity-improvements/) (<https://info.mobilerobot.com/applications/results/productivity-improvements/>), with greater [flexibility](https://info.mobilerobot.com/applications/results/operational-flexibility/) (<https://info.mobilerobot.com/applications/results/operational-flexibility/>) and a lower entry cost.

Manual judgment stays valuable for situations such as damaged pallets, unstable or top-heavy loads, plastic-wrap snags, misplaced pallets, steep dock plates, crowded floors, and urgent reprioritization. Autonomous-mode gradeability is 0°, which reinforces the manual role on slopes and dock plates. The reasoning is laid out in [Human-in-the-loop automation](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/) (<https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/>).

In practice, an operator uses manual judgment for sensitive or unstable loads — barrels, for example — and confined maneuvering, then hands the long transport

portion over to autonomous mode.

Related pages

- [How it works](https://info.mobilerobot.com/products/j1600/how-it-works/) (https://info.mobilerobot.com/products/j1600/how-it-works/) — the full setup and delivery workflow.
- [Safety overview](https://info.mobilerobot.com/products/j1600/safety-overview/) (https://info.mobilerobot.com/products/j1600/safety-overview/) — mode selection, takeover, and the layered safety architecture.
- [Features and benefits](https://info.mobilerobot.com/products/j1600/features-and-benefits/) (https://info.mobilerobot.com/products/j1600/features-and-benefits/) — what dual mode delivers in operation.

Features and Benefits

This page collects the J1600's design principles, headline features, and its operational benefits. For the underlying numbers, see [Technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>); for the commercial case, see [Pricing and ROI](https://info.mobilerobot.com/products/j1600/pricing-and-roi/) (<https://info.mobilerobot.com/products/j1600/pricing-and-roi/>).

Design principles

1. **Operator authority:** a person initiates work and decides when the machine may [enter autonomous mode](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>).
2. **Automate the walking:** repetitive transport, rather than every nuance of pallet handling, is the principal target.
3. **Familiar tool:** the tiller and manual behavior feel like a conventional electric pallet jack.
4. **Low threshold:** [training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>) takes about 30 minutes; standard use requires neither [mandatory Wi-Fi](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>) nor a systems project.
5. **Flexible change** (<https://info.mobilerobot.com/applications/results/operational-flexibility/>): operators add locations by driving and saving them rather than calling an automation expert.
6. **Progressive scale:** advanced software, [VDA 5050](https://info.mobilerobot.com/products/software/vda-5050/) (<https://info.mobilerobot.com/products/software/vda-5050/>), APIs, automatic charging, and fleet management remain available when needed.
7. **Economics for smaller operations:** the product targets [single-shift small and medium businesses with one to five pallet-jack operators](https://info.mobilerobot.com/company/about/markets-we-serve/) (<https://info.mobilerobot.com/company/about/markets-we-serve/>).

Headline features

- **Dual mode** (<https://info.mobilerobot.com/products/j1600/dual-mode/>): manual pallet-jack control and operator-initiated autonomous travel in one vehicle, with immediate takeover through the tiller.

- **Teach and repeat** (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>): drive to a point once, tap Save Location, and reuse it in any task. No software limit on saved locations.
- **No-code touchscreen operation:** tasks are created and launched from a [15-inch multi-touch interface](https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/>) — no programming.
- **3D LiDAR SLAM navigation** (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>): mapping and obstacle avoidance on an industrial NVIDIA Jetson computer, with no tracks, wires, reflectors, or building modifications.
- **Layered safety** (<https://info.mobilerobot.com/products/j1600/safety-overview/>): a 360-degree protective field, two 2D safety LiDARs, [speed-dependent safety zones](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/>), and certified components.
- **Out-of-the-box deployment:** ready to use on delivery; Wi-Fi optional; [no mandatory WMS, fleet-manager, or IT integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>) for basic use.
- **1,600 kg payload, 1.6 m manual lift:** carries up to 1,600 kg and [picks or drops manually](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>) at up to 1,600 mm; autonomous delivery is at floor level.
- **Manual and automatic charging** (<https://info.mobilerobot.com/products/j1600/chargers-and-accessories/>): plug-in charging like a regular pallet jack, or optional self-docking opportunity charging.
- **Progressive scaling:** VDA 5050, [REST API](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>), [Fleet Manager](https://info.mobilerobot.com/products/software/fleet-manager/) (<https://info.mobilerobot.com/products/software/fleet-manager/>), and advanced mission planning under [Advanced software](https://info.mobilerobot.com/products/j1600/software-and-integrations/) (<https://info.mobilerobot.com/products/j1600/software-and-integrations/>).

Operational benefits

- [Up to 80% reduction in manual work and operator time on repetitive transport](https://info.mobilerobot.com/applications/results/productivity-improvements/) (<https://info.mobilerobot.com/applications/results/productivity-improvements/>). This applies to the targeted travel portion of pallet work — it is not an 80% improvement to every warehouse process.
- Familiar manual handling and immediate takeover, so [exceptions](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/) (<https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/>) never stall the flow.
- Fast teach-and-repeat setup and redeployment — typical setup in hours or one day.

- No infrastructure changes or mandatory Wi-Fi for basic use.
- Reliable navigation in changing environments through 3D mapping.
- Lower entry cost and shorter time to value than a large automation project.
- Deployment in [brownfield sites](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>), without redesigning workflows.

Benefits beyond labor savings

- [Fewer workplace accidents, injuries](https://info.mobilerobot.com/applications/results/safety-improvements/) (<https://info.mobilerobot.com/applications/results/safety-improvements/>), and product damage compared with manual handling.
- Higher employee satisfaction by [removing repetitive walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) (<https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/>).
- Improved inventory tracking and control in an automated process.
- Steadier material flow and throughput.
- [More productive use of skilled labor](https://info.mobilerobot.com/applications/results/labor-reallocation/) (<https://info.mobilerobot.com/applications/results/labor-reallocation/>) and easier response to labor shortages.
- Less implementation and change risk than rigid full automation.

Why a human stays in the loop

Warehouses are messy, dynamic, and unpredictable. Ten common situations favor keeping a person in the loop: spotting damaged pallets, judging load stability, preventing plastic-wrap snags, locating misplaced pallets, catching damaged goods, handling steep dock plates, navigating crowded floors, responding to urgency, teaching routes on the spot, and avoiding automation overhead. These examples explain the design logic behind [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>); the full argument is on [Human-in-the-loop automation](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/) (<https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/>).

Recognition of the concept

The [IFOY 2026](https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/) (<https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/>) jury recognized the J1600 for its new product tier between manual pallet jacks and classic [AGVs](https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/) (<https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/>), low implementation barrier, intuitive operation, 3D LiDAR SLAM with layered safety, immediate human takeover, and applicability to SMEs and single-shift sites. See the

[Overview \(https://info.mobilerobot.com/products/j1600/overview/\)](https://info.mobilerobot.com/products/j1600/overview/) for the full recognition record.

Applications

The J1600 (<https://info.mobilerobot.com/products/j1600/overview/>) is built for horizontal, indoor pallet flows: [goods receiving](https://info.mobilerobot.com/applications/industries/goods-receiving/) (<https://info.mobilerobot.com/applications/industries/goods-receiving/>), storage, production supply, staging, [cross-docking](https://info.mobilerobot.com/applications/use-cases/cross-docking/) (<https://info.mobilerobot.com/applications/use-cases/cross-docking/>), and [shipping](https://info.mobilerobot.com/applications/industries/shipping-and-dispatch/) (<https://info.mobilerobot.com/applications/industries/shipping-and-dispatch/>). This page lists the proven use cases, the target environments, and the situations where the product is a poor or conditional fit.

Material-flow use cases

- **[Inbound receiving](https://info.mobilerobot.com/applications/use-cases/inbound-receiving/)** (<https://info.mobilerobot.com/applications/use-cases/inbound-receiving/>): unload a truck manually, then send the pallet autonomously to inbound inspection or storage.
- **[Production supply](https://info.mobilerobot.com/applications/use-cases/production-supply/)** (<https://info.mobilerobot.com/applications/use-cases/production-supply/>): an operator prepares or picks a pallet; the J1600 delivers materials or components to the production line on demand.
- **Cross-docking**: shuffle pallets across multiple origins and destinations without a bespoke task for every pair — saved points combine freely.
- **[Temporary storage](https://info.mobilerobot.com/applications/use-cases/temporary-storage/)** (<https://info.mobilerobot.com/applications/use-cases/temporary-storage/>): create and use short-lived storage points when demand changes.
- **New pallet locations**: add a point in minutes by driving there once and saving it.
- **[Receiving-to-storage-to-production-to-shipping](https://info.mobilerobot.com/applications/use-cases/production-to-shipping-transport/)** (<https://info.mobilerobot.com/applications/use-cases/production-to-shipping-transport/>): automate the long travel segments connecting standard warehouse zones.
- **[Buffer and staging management](https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/)** (<https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/>): transport between lines, staging areas, and storage zones.
- **[Local work-cell automation](https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/)** (<https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/>): serve stand-alone flows inside a larger facility where a full fleet project would be excessive.
- **[Brownfield operations](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/)** (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>): work around changing layouts and obstacles without permanent infrastructure — see [Navigation and obstacle avoidance](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>).

- **Sensitive or unstable loads** (<https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/>): use manual judgment for pickup and close maneuvering, then autonomous travel for the long route.
- **Open cages and open-base carriers** (<https://info.mobilerobot.com/applications/use-cases/open-cages-and-alternative-load-carriers/>): move supported carriers beyond EPAL Euro pallets, within the limits on [Pallet and load compatibility](https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/) (<https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/>).

Target environments

[Manufacturing](https://info.mobilerobot.com/applications/industries/manufacturing/) (<https://info.mobilerobot.com/applications/industries/manufacturing/>) and [internal production logistics](https://info.mobilerobot.com/applications/industries/internal-production-logistics/) (<https://info.mobilerobot.com/applications/industries/internal-production-logistics/>), [warehousing](https://info.mobilerobot.com/applications/industries/warehousing/) (<https://info.mobilerobot.com/applications/industries/warehousing/>) and goods receipt, [third-party logistics](https://info.mobilerobot.com/applications/industries/third-party-logistics/) (<https://info.mobilerobot.com/applications/industries/third-party-logistics/>), [e-commerce fulfillment](https://info.mobilerobot.com/applications/industries/e-commerce-and-fulfillment/) (<https://info.mobilerobot.com/applications/industries/e-commerce-and-fulfillment/>), and [grocery and FMCG \(fast-moving consumer goods\) distribution](https://info.mobilerobot.com/applications/industries/grocery-and-fmcg/) (<https://info.mobilerobot.com/applications/industries/grocery-and-fmcg/>).

The [primary focus](https://info.mobilerobot.com/company/about/markets-we-serve/) (<https://info.mobilerobot.com/company/about/markets-we-serve/>) is small and medium businesses running a single shift with one to five pallet-jack operators — facilities that cannot justify a large automation project — plus larger sites with many small local material flows or work cells too changeable for a conventional fleet project.

Customer problems addressed

- [Repetitive operator walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) (<https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/>) and non-value-added transport.
- [Labor shortages and high labor dependency](https://info.mobilerobot.com/applications/results/labor-reallocation/) (<https://info.mobilerobot.com/applications/results/labor-reallocation/>).
- Unsafe or tiring manual movement.
- Large cost and integration barriers to full automation.
- Process rigidity and slow reconfiguration.
- Variable layouts, temporary storage, and changing SKU mix.
- The need for fast, measurable return on investment without an infrastructure overhaul.

Poor-fit or conditional applications

The J1600 has firm application boundaries:

- Automatic driving is indoor and level-floor only — automatic gradeability is 0%.
- Automatic pallet drop is at floor level; lifting to 1.6 m is a manual capability.
- Operation is limited to 5–40°C and IP21 ingress protection.
- Loads must have an open base and fit within the 1,250 x 1,250 mm envelope.

Steep dock plates, slopes, outdoor legs, and high-level autonomous placement remain manual tasks or are out of scope. Check [Operating environment](https://info.mobilerobot.com/products/j1600/operating-environment/) (<https://info.mobilerobot.com/products/j1600/operating-environment/>), and [Pallet and load compatibility](https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/) (<https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/>) before planning a deployment, and see the wider [applications section](https://info.mobilerobot.com/category/applications/) (<https://info.mobilerobot.com/category/applications/>) for industry-specific guidance.

Evaluating a fit

Prospects can get a [30–60 minute hands-on demonstration](https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/) (<https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/>), a [two-week paid trial](https://info.mobilerobot.com/products/buying-and-deployment/two-week-trial/) (<https://info.mobilerobot.com/products/buying-and-deployment/two-week-trial/>), or a [proof of concept](https://info.mobilerobot.com/applications/planning/proof-of-concept-planning/) (<https://info.mobilerobot.com/applications/planning/proof-of-concept-planning/>) at their own plant; testing is also possible at the company's [Copenhagen demo and test area](https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/) (<https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/>). See [Pricing and ROI](https://info.mobilerobot.com/products/j1600/pricing-and-roi/) (<https://info.mobilerobot.com/products/j1600/pricing-and-roi/>) for trial pricing and the [support section](https://info.mobilerobot.com/category/support/) (<https://info.mobilerobot.com/category/support/>) for evaluation routes.

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.

Dimensions and Performance

This page holds the complete J1600 dimension, motion, and battery data. Headline figures and hardware components are on [Technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

PRELIMINARY SPECIFICATIONS

These January 2026 specifications are preliminary and subject to change.

Dimensions

Parameter	Metric	Imperial
Vehicle length	1,893 mm	75 in
Vehicle width	850 mm	33 in
Vehicle height, forks lowered	2,060 mm	81 in
Vehicle height, forks at maximum height	2,350 mm	93 in
Fork height, highest position	1,600 mm	63 in
Fork height, lowest position	90 mm	3.5 in
Fork length	1,150 mm	45 in
Fork width	180 mm	7 in
Fork thickness	60 mm	2.4 in
Fork outer distance	680 mm	27 in
Fork inner distance	320 mm	13 in
Ground clearance	30 mm	1.2 in
Tiller-handle height, upright	1,234 mm	49 in
Wheelbase	1,106 mm	44 in
Turning radius	1,501 mm	59 in

Truck weight is 980 kg.

Motion and lift performance

Parameter	Metric	Imperial
Rated payload	1,600 kg	approximately 3,500 lb
Top speed	5.4 km/h (1.5 m/s)	3.4 mph
Fork lifting speed, no load	0.10 m/s	0.33 ft/s
Fork lifting speed, full load	0.08 m/s	0.26 ft/s
Fork lowering speed, no load	0.08 m/s	0.26 ft/s
Fork lowering speed, full load	0.12 m/s	0.39 ft/s
Automatic pallet-delivery height	Floor level	Floor level
Manual pallet-pick height	Up to 1,600 mm	Up to 63 in
Manual pallet-delivery height	Up to 1,600 mm	Up to 63 in

The up-to-1,600 mm pick and drop heights are [manual capabilities](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>); autonomous delivery is always at floor level. Gradeability and floor requirements are on [Operating environment](https://info.mobilerobot.com/products/j1600/operating-environment/) (<https://info.mobilerobot.com/products/j1600/operating-environment/>).

Battery and power

Parameter	Value
Battery	24 V, 200 Ah
Chemistry	Lithium iron phosphate (LiFePO4)
Drive motor	AC, 1.5 kW
Lift motor	2.2 kW
Drain while driving fully loaded	approximately 13% per hour
Drain while driving without load	approximately 12% per hour
Standby drain	approximately 2% per hour
Charging rate	approximately 47 percentage points per hour

Runtime

Runtime exceeds eight hours in a typical duty cycle. The listed [drain rates](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/>) imply approximately 7.7 hours of continuous fully loaded driving, or 8.3 hours unloaded, before allowing for standby, lifting, duty cycle, battery reserve, and operating conditions. These calculated figures are derived from the drain rates and are not guaranteed runtimes.

Charging options — manual plug-in and automatic opportunity charging — are described on [Chargers and accessories](https://info.mobilerobot.com/products/j1600/chargers-and-accessories/) (<https://info.mobilerobot.com/products/j1600/chargers-and-accessories/>).

Pallet and Load Compatibility

The J1600 requires an **open-base carrier with no bottom deck board** so its forks can enter. Within that requirement it handles a wide range of pallets and carriers, subject to the size envelope below.

Load envelope

Parameter	Limit/support
Maximum pallet/load length, including overhang	1,250 mm / 49 in
Maximum pallet/load width, including overhang	1,250 mm / 49 in
Maximum load height from floor	1,700 mm / 67 in
Maximum payload	1,600 kg / approximately 3,500 lb
EPAL support	EPAL Euro Pallet, EPAL 3, EPAL 6
GMA support	All GMA pallets with open base
Custom carriers	Any forkable open-base carrier within the size limits

The exact maximum envelope is 1,250 mm / 49 in per side. Some shorter summaries round it to 1.2 m / 48 in; use the precise figure when checking a load.

Supported carrier types

Beyond standard EPAL Euro pallets, supported examples include [open cages, barrels on open-base carriers](https://info.mobilerobot.com/applications/use-cases/open-cages-and-alternative-load-carriers/) (<https://info.mobilerobot.com/applications/use-cases/open-cages-and-alternative-load-carriers/>), sensitive loads, and other custom carriers. The practical rule: if the base is open and forkable and the carrier fits the envelope, the J1600 can pick it up.

Compatibility ultimately depends on base geometry, size, stability, and operator judgment. No [blanket approval](https://info.mobilerobot.com/safety-compliance/safe-deployment/approved-loads-and-pallets/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/approved-loads-and-pallets/>), exists for every carrier or for hazardous materials — assess each load case.

The operator's role with difficult loads

Pallet pickup is always manual, which keeps load judgment with the person. For [sensitive or unstable loads](https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/) (<https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/>) — barrels, top-heavy stacks, leaning loads — the operator handles pickup and close maneuvering manually, then hands the long transport portion to autonomous mode. See [Dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>), for the handover and [Human-in-the-loop automation](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/) (<https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/>), for the reasoning.

Fork geometry

For checking pallet fit against the forks: fork length 1,150 mm, fork width 180 mm, fork thickness 60 mm, outer distance 680 mm, inner distance 320 mm, lowest fork height 90 mm. The full table is on [Dimensions and performance](https://info.mobilerobot.com/products/j1600/dimensions-and-performance/) (<https://info.mobilerobot.com/products/j1600/dimensions-and-performance/>).

Related pages

- [Applications](https://info.mobilerobot.com/products/j1600/applications/) (<https://info.mobilerobot.com/products/j1600/applications/>) — use cases including open cages and unstable loads.
- [Operating environment](https://info.mobilerobot.com/products/j1600/operating-environment/) (<https://info.mobilerobot.com/products/j1600/operating-environment/>) — floor, gradient, and climate limits that apply alongside the load envelope.
- [Glossary](https://info.mobilerobot.com/documentation/concepts/glossary/) (<https://info.mobilerobot.com/documentation/concepts/glossary/>) — EPAL, GMA, and other carrier terms.

Operating Environment

The J1600 (<https://info.mobilerobot.com/products/j1600/overview/>) is designed for indoor, floor-to-floor transport. This page lists the environmental limits a site must meet, in both automatic and manual mode.

PRELIMINARY SPECIFICATIONS

These January 2026 specifications are preliminary and subject to change.

Environmental limits

Parameter	Metric	Imperial/other
Gradeability, automatic mode	0°	0%
Gradeability, manual mode, no load	2.86°	5%
Gradeability, manual mode, full load	1.72°	3%
Maximum traversable bump height	25 mm	1 in
Maximum traversable gap width	20 mm	0.8 in
Minimum operating temperature	5°C	41°F
Maximum operating temperature	40°C	104°F
Relative humidity	20–80%	non-condensing
Floor flatness/levelness	TR34 FM3	FF 25 / FL 20
Ingress protection	IP21	protected against objects over 12.5 mm and vertically dripping water

What the limits mean in practice

- **Automatic mode is a level-floor application** (<https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/>). With 0% automatic gradeability, slopes, ramps, and steep dock plates remain manual tasks. In manual mode (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>), the vehicle climbs up to 5% unloaded or 3% fully loaded.
- **Small floor defects are tolerated.** Bumps up to 25 mm and gaps up to 20 mm can be traversed; the floor must meet TR34 FM3 (FF 25 / FL 20) flatness.

- **Indoor climate only.** IP21 protection and the 5–40°C, 20–80% non-condensing range rule out outdoor operation, cold stores below 5°C, and wet areas.

The division of labor follows from these limits: the operator handles dock plates, slopes, and irregular surfaces manually, and the robot automates the level-floor travel. See [Dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>) and [Applications](https://info.mobilerobot.com/products/j1600/applications/) (<https://info.mobilerobot.com/products/j1600/applications/>) for fit guidance.

Real-world validation

The company validates the J1600 at its [Copenhagen demo and test area](https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/) (<https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/>) under intentionally real-world conditions, including uneven flooring, water-filled test loads, and multiple test setups. The limits above still apply to production deployments.

Related pages

- [Technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>) — the master data table.
- [Pallet and load compatibility](https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/) (<https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/>) — the load envelope that applies alongside these site limits.
- [Navigation and obstacle avoidance](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>) — how the robot handles dynamic obstacles within a compliant site.

Navigation and Obstacle Avoidance

The J1600's autonomy is based on **3D LiDAR SLAM** (simultaneous localization and mapping) processed by an industrial NVIDIA Jetson AI computer. It builds and updates a three-dimensional map while an operator drives, then localizes and plans routes to saved destinations — with no fixed tracks, wires, reflectors, or building modifications.

Capabilities

- Continuous environmental learning during manual driving.
- 3D mapping without infrastructure changes to the building.
- Autonomous routing to saved locations.
- Obstacle detection and avoidance in dynamic environments.
- Preferred travel zones for safer routing through production areas.
- Navigation to any saved point without teaching every possible origin-destination combination.
- Expansion to APIs, [VDA 5050](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/) (<https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/>), and fleet management under [Advanced software](https://info.mobilerobot.com/products/j1600/software-and-integrations/) (<https://info.mobilerobot.com/products/j1600/software-and-integrations/>).

The system scans environmental structures at heights reaching up to 70 m above the vehicle. Its 3D mapping is designed for greater precision and reliability than traditional 2D navigation in complex or changing environments.

For detailed geometry, sensing range, localization accuracy, minimum aisle width, and obstacle-class figures, contact the company or a partner with your site-specific engineering questions.

Sensor set

- **3D LiDAR** — mapping, localization, and obstacle detection.
- **RGB AI camera** — part of the perception stack.
- **NVIDIA Jetson industrial PC** — on-board compute for SLAM and route planning.

Navigation versus safety sensing

The 3D LiDAR and RGB AI camera belong to the control and navigation stack.

[Personnel protection is separate](https://info.mobilerobot.com/safety-compliance/safety-overview/navigation-sensors-vs-safety-sensors/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/navigation-sensors-vs-safety-sensors/>): two 2D safety LiDARs, certified components, and an independent safety controller supply the certified 360-degree protective field. 3D navigation maps and avoids objects, while the 2D safety stack provides the certified [person detection](https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/>). See [Safety overview](https://info.mobilerobot.com/products/j1600/safety-overview/) (<https://info.mobilerobot.com/products/j1600/safety-overview/>).

Mapping workflow

Mapping happens as a by-product of normal manual driving. During [first-time setup](https://info.mobilerobot.com/products/j1600/how-it-works/) (<https://info.mobilerobot.com/products/j1600/how-it-works/>), the operator drives the facility with the tiller while the robot learns the environment, then saves [drop points](https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/) (<https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/>) by tapping **Save location**. The map is updated continuously afterward, so gradual [layout changes](https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/) (<https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/>) do not require [remapping projects](https://info.mobilerobot.com/support/troubleshooting/mapping-problems/) (<https://info.mobilerobot.com/support/troubleshooting/mapping-problems/>).

Brownfield relevance

Because the J1600 needs no fixed infrastructure and keeps updating its environment model, it suits [brownfield sites](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>) and changing layouts: [temporary storage](https://info.mobilerobot.com/applications/use-cases/temporary-storage/) (<https://info.mobilerobot.com/applications/use-cases/temporary-storage/>), shifting staging areas, and cluttered receiving zones. The 3D LiDARs let it drive around whatever obstacles appear in its path. The limits in [Operating environment](https://info.mobilerobot.com/products/j1600/operating-environment/) (<https://info.mobilerobot.com/products/j1600/operating-environment/>), — level floors in automatic mode, indoor climate, floor flatness — still apply.

Related pages

- [How it works](https://info.mobilerobot.com/products/j1600/how-it-works/) (<https://info.mobilerobot.com/products/j1600/how-it-works/>) — setup and the delivery workflow.
- [Technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>) — the full hardware list.

- [Glossary \(https://info.mobilerobot.com/documentation/concepts/glossary/\)](https://info.mobilerobot.com/documentation/concepts/glossary/) — SLAM, LiDAR, AMR, and related terms.

Safety Overview

The J1600 (<https://info.mobilerobot.com/products/j1600/overview/>) uses layered safety: navigation, sensing, an independent safety controller, certified actuation, human confirmation, and physical override. A 360-degree protective field supports forward and reverse autonomous travel. This page summarizes the architecture, the assigned Performance Levels, and the [compliance list](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/) (<https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/>); a deeper treatment is in [How J1600 safety works](https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/>).

Safety components

- Independent safety controller.
- Two 2D safety LiDAR scanners, front and rear.
- [Three emergency-stop buttons](https://info.mobilerobot.com/safety-compliance/safety-overview/emergency-stops-and-manual-takeover/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/emergency-stops-and-manual-takeover/>).
- Belly button for stop and reverse.
- [Load-detection sensor](https://info.mobilerobot.com/safety-compliance/safety-functions/load-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/load-detection/>).
- [Tiller-position switch](https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/>) for emergency stop.
- Tiller-position switch for manual control.
- [Safety-certified driving-speed encoder](https://info.mobilerobot.com/safety-compliance/safety-functions/speed-monitoring/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/speed-monitoring/>).
- Safety-certified driving-direction encoder.
- Two safety-certified motor controllers.

Operating behavior

- The operator must [confirm entry into automatic mode](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>), and the robot tells the operator to step away before starting.
- Blue floor light strips display the protected area and status; three blue light strips show the current safety zone.

- The [protective field changes with speed](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/>) and expands at higher speeds.
- Grabbing or moving the tiller enables immediate manual takeover.
- 3D navigation maps and avoids objects, while the [separate 2D safety stack](https://info.mobilerobot.com/safety-compliance/safety-overview/navigation-sensors-vs-safety-sensors/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/navigation-sensors-vs-safety-sensors/>), supplies certified personnel protection — see [Navigation and obstacle avoidance](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>).

Safety functions and Performance Levels

J1600 safety functions carry the following preliminary [Performance Levels \(PL\)](https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/>) per [EN ISO 13849-1](https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/) (<https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/>):

Safety function	Performance Level
Braking system	PL d
Speed monitoring and control	PL c
Safety-field size adjustment	PL d
Load detection	PL b
Charging-current relay	PL b
Emergency-stop button	PL d
Person detection in safety field	PL d
Automatic/manual mode selection	PL c
Tiller-position detection	PL c

These levels apply to individual functions within the architecture; they do not mean every subsystem shares the same PL.

Standards and compliance

The J1600 is [CE marked](https://info.mobilerobot.com/safety-compliance/certificates/ce-declaration-of-conformity/) (<https://info.mobilerobot.com/safety-compliance/certificates/ce-declaration-of-conformity/>). The preliminary compliance list:

European directives and regulation

- Directive 2006/42/EC — [Machinery Directive](https://info.mobilerobot.com/safety-compliance/standards/eu-machinery-requirements/) (<https://info.mobilerobot.com/safety-compliance/standards/eu-machinery-requirements/>).
- Directive 2014/30/EU — [EMC Directive](https://info.mobilerobot.com/safety-compliance/standards/emc-red-rohs-and-battery-regulations/) (<https://info.mobilerobot.com/safety-compliance/standards/emc-red-rohs-and-battery-regulations/>).
- Directive 2014/53/EU — Radio Equipment Directive (RED)
- Directive 2011/65/EU — RoHS
- Regulation (EU) 2023/1542 — Batteries Regulation

Standards

- [EN ISO 3691-4:2023](https://info.mobilerobot.com/safety-compliance/standards/iso-3691-4/) (<https://info.mobilerobot.com/safety-compliance/standards/iso-3691-4/>).
- EN ISO 13849-1:2023
- [EN ISO 12100:2010](https://info.mobilerobot.com/safety-compliance/standards/iso-12100/) (<https://info.mobilerobot.com/safety-compliance/standards/iso-12100/>).
- [EN ISO 3691-1:2015+A1:2020](https://info.mobilerobot.com/safety-compliance/standards/iso-3691-1/) (<https://info.mobilerobot.com/safety-compliance/standards/iso-3691-1/>).
- [ANSI/ITSDF B56.5-2024](https://info.mobilerobot.com/safety-compliance/standards/ansi-itsdf-b56-5/) (<https://info.mobilerobot.com/safety-compliance/standards/ansi-itsdf-b56-5/>).
- [ANSI/ITSDF B56.1-2020](https://info.mobilerobot.com/safety-compliance/standards/ansi-itsdf-b56-1/) (<https://info.mobilerobot.com/safety-compliance/standards/ansi-itsdf-b56-1/>).

Battery transport testing

- UN Manual of Tests and Criteria, subsection 38.3 ([UN 38.3](https://info.mobilerobot.com/safety-compliance/certificates/battery-un-38-3-documentation/) (<https://info.mobilerobot.com/safety-compliance/certificates/battery-un-38-3-documentation/>))

In short: the J1600 meets EU and US safety requirements, in particular ISO 3691-4 and ANSI/ITSDF B56.5. Request [certificates](https://info.mobilerobot.com/safety-compliance/certificates/) (<https://info.mobilerobot.com/safety-compliance/certificates/>), test reports, declaration numbers, notified-body information, and country-specific approvals through the company or a partner.

Benefits and limits

The built-in safety functions improve predictability and may [reduce workplace accidents](https://info.mobilerobot.com/applications/results/safety-improvements/) compared with manual pallet handling. For safety-distance curves, stopping distances, and validation data, use current product documentation for deployment decisions and [site risk assessments](https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/).

Human control complements rather than replaces the certified safety systems — [the operator's role](https://info.mobilerobot.com/documentation/user-guides/operator-manual/) is part of the design, not the only safeguard. See [Dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) and [Human-in-the-loop automation](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/).

Related pages

- [Safety and compliance section](https://info.mobilerobot.com/category/safety-compliance/) — site-level safety guidance.
- [Operating environment](https://info.mobilerobot.com/products/j1600/operating-environment/) — the site limits the safety design assumes.
- [Glossary](https://info.mobilerobot.com/documentation/concepts/glossary/) — Performance Level, safety field, and related terms.

Software and Integrations

One J1600 hardware platform supports two software versions: Standard and Advanced (<https://info.mobilerobot.com/products/software/software-comparison/>). Standard (<https://info.mobilerobot.com/products/software/standard-software/>) covers single-unit, no-integration deployments; Advanced adds interoperability, APIs, and fleet capabilities.

Standard software

- Reduced to essential functions for maximum ease of use.
- Built around configuration-free **teach and repeat** (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>): drive to a point, save it, reuse it in tasks.
- Designed so an existing pallet-jack operator can use it without training (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>) beyond the basic 30 minutes.
- Ideal for a single-unit deployment without systems integration.
- Touchscreen task launch and saved locations.
- Wi-Fi optional (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>) for the basic out-of-box workflow.

Advanced software

- **VDA 5050** interoperability.
- **REST API** (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>) for software integration.
- **Fleet Manager** (<https://info.mobilerobot.com/products/software/fleet-manager/>).
- Advanced mission planning.
- Advanced system integration with other software and equipment (<https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/>).
- Priced as a separate upgrade.

Upgrade rules

The [Advanced upgrade](https://info.mobilerobot.com/products/software/advanced-software/) is easiest to install at the factory when the robot is ordered. A partner may perform the upgrade later; customers cannot perform it themselves.

VDA 5050 and APIs

The J1600 has full [VDA 5050](https://info.mobilerobot.com/products/software/vda-5050/) support. VDA 5050 is the interoperability interface that lets mobile robots from different vendors work together under a compatible fleet-management layer, and the company works with established VDA 5050 fleet-management providers. For the exact VDA 5050 version, API schema, authentication model, and supported fleet managers, contact the company or a partner.

Automation functions by level

- **Basic automation:** on-screen task start, saved locations, autonomous floor-level drop, self-drive to saved locations, return-to-me, go-to-parking.
- **Advanced automation:** [come-to-me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) (call the robot from a mobile app or web interface), automatic charging, VDA 5050 fleet management, API integrations.

This split follows the capability ladder on [Dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/). Automatic charging hardware is covered on [Chargers and accessories](https://info.mobilerobot.com/products/j1600/chargers-and-accessories/).

No integration required for basic use

Basic deployment needs no warehouse-management system (WMS), no fleet manager, and [no IT integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/); Wi-Fi is optional. [Integration is a scaling option](https://info.mobilerobot.com/documentation/technical-integration/integration-overview/), not an entry requirement — the reasoning is part of the product's [design principles](https://info.mobilerobot.com/products/j1600/features-and-benefits/).

2026 list pricing

Software item	End-user list price
Upgrade to Advanced software	€14,500
Fleet Manager software, per robot	€6,500

Full pricing context is on [Pricing and ROI](https://info.mobilerobot.com/products/j1600/pricing-and-roi/) (https://info.mobilerobot.com/products/j1600/pricing-and-roi/).

Related pages

- [How it works](https://info.mobilerobot.com/products/j1600/how-it-works/) (https://info.mobilerobot.com/products/j1600/how-it-works/) — the task workflow the Standard software drives.
- [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 under the software.
- [Glossary](https://info.mobilerobot.com/documentation/concepts/glossary/) (https://info.mobilerobot.com/documentation/concepts/glossary/) — VDA 5050, REST API, WMS, Fleet Manager.

Chargers and Accessories

The J1600 supports two charging options: a manual plug-in charger and an [optional automatic charging station](https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/) (<https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/>). This page covers both, the battery figures behind them, and list prices.

Manual charging

[Manual charging](https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/) (<https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/>) works like charging a conventional electric pallet jack: plug in the charger during a break — before lunch, for example — or whenever the machine is idle.

Automatic charging

With the optional automatic charger, the robot drives to the station, positions itself in front of the charger, and a charging interface extends to the vehicle's charging plates. This enables **opportunity charging** (<https://info.mobilerobot.com/applications/scenarios/automatic-charging/>): the robot tops up whenever it is not busy, without operator involvement.

- Automatic charging is an advanced automation capability — see the capability ladder on [Dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>).
- When purchased with the [installation and commissioning package](https://info.mobilerobot.com/products/j1600/pricing-and-roi/) (<https://info.mobilerobot.com/products/j1600/pricing-and-roi/>), automatic-charging setup is part of installation Day 1.

Battery and rates

Parameter	Value
Battery	24 V, 200 Ah lithium iron phosphate (LiFePO4)
Charging rate	approximately 47 percentage points per hour
Drain while driving fully loaded	approximately 13% per hour
Drain while driving unloaded	approximately 12% per hour
Standby drain	approximately 2% per hour
Charging-current relay safety function	PL b

Runtime exceeds eight hours in a typical duty cycle; full battery detail is on [Dimensions and performance](https://info.mobilerobot.com/products/j1600/dimensions-and-performance/) (<https://info.mobilerobot.com/products/j1600/dimensions-and-performance/>).

2026 list pricing

Item	End-user list price
Manual charger	€3,600
Automatic charger	€8,400

CHARGER NOT INCLUDED IN THE BASE PRICE

A charger is not included in the J1600's €65,000 base purchase price. [Plan for one of the two chargers](https://info.mobilerobot.com/documentation/installation/charger-installation/) (<https://info.mobilerobot.com/documentation/installation/charger-installation/>) when configuring a purchase — see [Pricing and ROI](https://info.mobilerobot.com/products/j1600/pricing-and-roi/) (<https://info.mobilerobot.com/products/j1600/pricing-and-roi/>) for typical configurations.

Related pages

- [Dimensions and performance](https://info.mobilerobot.com/products/j1600/dimensions-and-performance/) (<https://info.mobilerobot.com/products/j1600/dimensions-and-performance/>) — battery and power data.

- [Software and integrations](https://info.mobilerobot.com/products/j1600/software-and-integrations/) (https://info.mobilerobot.com/products/j1600/software-and-integrations/) — the advanced automation functions that include automatic charging.
- [Safety overview](https://info.mobilerobot.com/products/j1600/safety-overview/) (https://info.mobilerobot.com/products/j1600/safety-overview/) — Performance Levels including the charging-current relay.

Pricing and ROI

List prices for the J1600 are public. Purchases, trials, and service are delivered through [the partner network](https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/) (<https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/>) — the company [does not sell robots directly to end users](https://info.mobilerobot.com/company/about/business-model/) (<https://info.mobilerobot.com/company/about/business-model/>). Prices below are 2026 euro list prices.

End-user list prices

Item	End-user list price
J1600 self-driving pallet jack	€65,000
Two-week paid trial, including setup and support	€4,000
Installation and commissioning	€10,000
Manual charger	€3,600
Automatic charger	€8,400
Advanced software upgrade	€14,500
Fleet Manager, per robot	€6,500
Basic Care support, per robot/year	€4,900
Full Care support, per robot/year	€13,000
On-site support, per day plus travel	€2,400

A charger is not included in the €65,000 base price — see [Chargers and accessories](https://info.mobilerobot.com/products/j1600/chargers-and-accessories/) (<https://info.mobilerobot.com/products/j1600/chargers-and-accessories/>).

Typical configurations

- J1600 + [manual charger](https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/) (<https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/>) + installation and commissioning: €78,600 list.

- J1600 + automatic charger + installation and commissioning: €83,400 list.

A typical customer configuration is expected to cost around or below €80,000, which corresponds to the manual-charger configuration.

Trying before buying

The standard evaluation path is a [30–60 minute hands-on demonstration](https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/) (<https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/>), followed by a [two-week paid trial](https://info.mobilerobot.com/products/buying-and-deployment/two-week-trial/) (<https://info.mobilerobot.com/products/buying-and-deployment/two-week-trial/>) at **€4,000** including setup and support, with free return at any time, no questions asked. Proofs of concept at the customer's plant are also possible. See the [support section](https://info.mobilerobot.com/category/support/) (<https://info.mobilerobot.com/category/support/>) for evaluation routes.

The labor-saving argument

The J1600 [reduces manual work and operator travel on repetitive transport by up to 80%](https://info.mobilerobot.com/applications/results/productivity-improvements/) (<https://info.mobilerobot.com/applications/results/productivity-improvements/>) — not an 80% improvement to every warehouse process.

Model	Setup	Flexibility	Labor saving
Manual pallet jack	None	Full manual flexibility	None
J1600 dual mode	Hours	Manual control plus saved autonomous delivery	Up to 80% of operator time on target travel
Fully automated system	Weeks or a longer project	Preprogrammed, expert-configured	Up to 100% of task labor, if fully automated

The economics are designed to work for a single-shift SME operating eight hours per day, five days per week — no 24/7 operation is needed. The €65,000 base price contrasts with full-automation investments that can reach approximately €1 million once [warehouse-management and fleet integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>) are included. The proposition: roughly 80% of the benefit, at a fraction of the price, and quick to get going.

A complete ROI model with wage assumptions, utilization, maintenance cost, financing rate, tax, or payback period is not available; build the business case on your own site figures.

Returns beyond labor cost

- [Fewer workplace accidents, injuries](https://info.mobilerobot.com/applications/results/safety-improvements/) (<https://info.mobilerobot.com/applications/results/safety-improvements/>), and product damage.
- Higher employee satisfaction by [removing repetitive walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) (<https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/>).
- Improved inventory tracking and control in an automated process.
- Steadier material flow and throughput.
- [More productive use of skilled labor](https://info.mobilerobot.com/applications/results/labor-reallocation/) (<https://info.mobilerobot.com/applications/results/labor-reallocation/>) and easier response to labor shortages.
- Less implementation and change risk than rigid full automation.

Installation, commissioning, and support

The €10,000 [installation and commissioning package](https://info.mobilerobot.com/products/buying-and-deployment/installation-and-commissioning/) (<https://info.mobilerobot.com/products/buying-and-deployment/installation-and-commissioning/>), covers pre-installation feasibility and risk assessment, on-site setup with up to 25 drop points, task and safety validation, [operator training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>), monitoring, acceptance testing, and handover over five days. Annual **Basic Care** (€4,900 per robot/year) and **Full Care** (€13,000 per robot/year) support plans are available, alongside a Free plan with pay-as-needed service. Details are in the [support section](https://info.mobilerobot.com/category/support/) (<https://info.mobilerobot.com/category/support/>).

Buying through partners

All prices above are end-user list prices. [Purchases](https://info.mobilerobot.com/products/buying-and-deployment/request-a-quote/) (<https://info.mobilerobot.com/products/buying-and-deployment/request-a-quote/>) run through distributors, integrators, and service partners; partner-facing commercial terms are described in the [partner section](https://info.mobilerobot.com/category/partners/) (<https://info.mobilerobot.com/category/partners/>).

Related pages

- [Overview](https://info.mobilerobot.com/products/j1600/overview/) (https://info.mobilerobot.com/products/j1600/overview/) — product summary and availability.
- [Software and integrations](https://info.mobilerobot.com/products/j1600/software-and-integrations/) (https://info.mobilerobot.com/products/j1600/software-and-integrations/) — what the Advanced upgrade and [Fleet Manager](https://info.mobilerobot.com/products/software/fleet-manager/) (https://info.mobilerobot.com/products/software/fleet-manager/) add.
- [Features and benefits](https://info.mobilerobot.com/products/j1600/features-and-benefits/) (https://info.mobilerobot.com/products/j1600/features-and-benefits/) — the operational case behind the numbers.