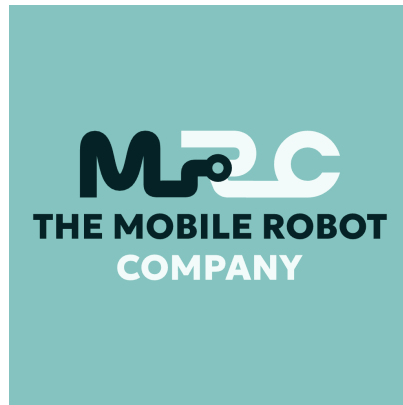




The Mobile Robot Company

Knowledge Center — complete manual · 2026-08-04

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

Welcome

The Knowledge Center for **The Mobile Robot Company** and the **J1600 self-driving pallet jack** — a dual-mode machine you drive like an ordinary electric pallet jack or send autonomously to saved locations.



Products

[The J1600, software, chargers, pricing, and how to buy.](#)

[\(https://info.mobilerobot.com/category/products/\)](https://info.mobilerobot.com/category/products/)



Documentation

[Getting started, operator guides, installation, integration, and reference.](#)

[\(https://info.mobilerobot.com/category/documentation/\)](https://info.mobilerobot.com/category/documentation/)



Support

[FAQs, troubleshooting, service plans, and training.](#)

[\(https://info.mobilerobot.com/category/support/\)](https://info.mobilerobot.com/category/support/)



Safety & Compliance

[How J1600 safety works, safety functions, standards, and safe deployment.](#)

[\(https://info.mobilerobot.com/category/safety-compliance/\)](https://info.mobilerobot.com/category/safety-compliance/)



Applications

[Use cases, operating scenarios, industries, and results.](#)

[\(https://info.mobilerobot.com/category/applications/\)](https://info.mobilerobot.com/category/applications/)



Partners

[The partner program and how to join.](#)

[\(https://info.mobilerobot.com/category/partners/\)](https://info.mobilerobot.com/category/partners/)



Company

Who we are, our history, team, and locations.

(<https://info.mobilerobot.com/category/company/>).

Newsroom

News, awards, events, media kit, and videos.

(<https://info.mobilerobot.com/category/newsroom/>).

Start here

- **New to the J1600?** Read the [Overview](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>), and [How It Works](https://info.mobilerobot.com/products/j1600/how-it-works/) (<https://info.mobilerobot.com/products/j1600/how-it-works/>).
- **Just received a robot?** Follow the [Quick Start Guide](https://info.mobilerobot.com/documentation/getting-started/j1600-quick-start-guide/) (<https://info.mobilerobot.com/documentation/getting-started/j1600-quick-start-guide/>).
- **Planning a deployment?** Check [Is the J1600 Right for My Application?](https://info.mobilerobot.com/applications/planning/is-the-j1600-right-for-my-application/) (<https://info.mobilerobot.com/applications/planning/is-the-j1600-right-for-my-application/>).
- **Need numbers?** All figures live in the [Technical Specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Products

The J1600 self-driving pallet jack, software, chargers, accessories, and how to buy.



J1600

14 pages



Software

6 pages



Chargers and Accessories

4 pages



Buying and Deployment

6 pages

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.

Software

The J1600's software packages, fleet management, and integration interfaces — what each includes, what it costs, and how the options compare.



Standard Software

What the J1600's Standard software includes — teach-and-repeat task creation, saved locations, and no-code touchscreen operation with no mandatory Wi-Fi or IT integration.



Advanced Software

The J1600 Advanced software upgrade adds VDA 5050 interoperability, a REST API, Fleet Manager, and advanced mission planning. 2026 list price €14,500.



Fleet Manager

Fleet Manager is the J1600's per-robot software for orchestrated multi-robot deployments. 2026 list price €6,500 per robot; part of the Advanced software feature set.



VDA 5050

The J1600 has full VDA 5050 support under Advanced software, letting it run alongside mobile robots from other vendors under one compatible fleet-management layer.



REST API and Integrations

The J1600's REST API and system-integration options under Advanced software — and why basic operation needs no WMS, fleet manager, or IT integration at all.



Software Comparison

Side-by-side comparison of the J1600's Standard and Advanced software packages, the capability ladder from manual functions to advanced automation, and 2026 list prices.

Standard Software

Standard software is the base software on the [J1600 self-driving pallet jack](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>). It is deliberately 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/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>), and designed to feel "consumer-level easy" to anyone who already operates an electric pallet jack.

What it includes

- **Teach and Repeat [task creation](https://info.mobilerobot.com/documentation/user-guides/task-management/)** (<https://info.mobilerobot.com/documentation/user-guides/task-management/>) — drive to a point, save it, and reuse it in autonomous tasks. No programming or configuration is required.
- **Touchscreen task launch** — tasks are created and started from the [15-inch multi-touch display](https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/>) on the vehicle.
- **Saved locations** — 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/>). The software has no limit on the number of saved locations.
- **Basic automation functions** — start automatic tasks on-screen, autonomous driving to saved locations, floor-level pallet drop, return-to-me, and go-to-parking.

Working with tasks and locations

The operator [picks up a pallet manually](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>), chooses a saved destination on the touchscreen, selects what the robot should do after delivery (return to origin, go to another point or parking, or [stop and wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/>)), and [confirms autonomous mode](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>) with the physical start button. Locations can be recombined freely — you do not need to teach every possible A-to-B variation. See [Dual Mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>) for how manual and autonomous operation share one vehicle.

Deployment requirements

Standard software is intended for single-unit deployments without a systems project:

- [Wi-Fi is optional](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>) for the [basic out-of-box workflow](https://info.mobilerobot.com/products/j1600/how-it-works/) (<https://info.mobilerobot.com/products/j1600/how-it-works/>).
- [No warehouse-management system \(WMS\), fleet manager, or IT integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>) is required.
- No building modifications, tracks, wires, or reflectors are needed — navigation uses [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>).
- [Training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>) takes about 30 minutes for an existing electric-pallet-jack operator, supported by an on-device or online tutorial.

Who it is for

Standard software fits operations that want one robot running quickly: a single J1600 automating repetitive floor-to-floor transport, with operators adding or changing locations themselves instead of calling an automation expert.

Upgrading

When the application grows, the [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>) upgrade adds [VDA 5050](https://info.mobilerobot.com/products/software/vda-5050/) (<https://info.mobilerobot.com/products/software/vda-5050/>) interoperability, a [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/>), advanced mission planning, and deeper system integration. See the [software comparison](https://info.mobilerobot.com/products/software/software-comparison/) (<https://info.mobilerobot.com/products/software/software-comparison/>) for a side-by-side view.

Advanced Software

Advanced software is the upgrade package for the [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>). One J1600 hardware platform supports two software versions: [Standard](https://info.mobilerobot.com/products/software/standard-software/) (<https://info.mobilerobot.com/products/software/standard-software/>), reduced to essential functions, and Advanced, which opens the vehicle to fleets and system integration.

What it adds

- **VDA 5050 interoperability** — full support for the multi-vendor fleet interface. See [VDA 5050](https://info.mobilerobot.com/products/software/vda-5050/) (<https://info.mobilerobot.com/products/software/vda-5050/>).
- **REST API** — a software interface for integrating the J1600 with other software and equipment. See [REST API and integrations](https://info.mobilerobot.com/products/software/rest-api-and-integrations/) (<https://info.mobilerobot.com/products/software/rest-api-and-integrations/>).
- **Fleet Manager** — per-robot software for orchestrated multi-robot deployments, priced separately. See [Fleet Manager](https://info.mobilerobot.com/products/software/fleet-manager/) (<https://info.mobilerobot.com/products/software/fleet-manager/>).
- **Advanced mission planning** — beyond the [standard task patterns](https://info.mobilerobot.com/documentation/user-guides/task-management/) (<https://info.mobilerobot.com/documentation/user-guides/task-management/>).
- **Advanced system integration** — [connecting the robot with other software and equipment](https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/) (<https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/>) in the facility.

Price

Item	2026 end-user list price
Upgrade to Advanced software	€14,500

Fleet Manager is priced separately at €6,500 per robot. See [Available options](https://info.mobilerobot.com/products/chargers-and-accessories/available-options/) (<https://info.mobilerobot.com/products/chargers-and-accessories/available-options/>) for the full options catalog.

How the upgrade is installed

The upgrade is easiest to install at the factory when the robot is ordered. A partner can perform the upgrade later on an existing robot; customers cannot install it themselves. If you expect to need fleet operation or integrations, order the upgrade with the robot.

When to choose it

Choose Advanced software when you plan to run more than one robot, coordinate the J1600 with robots from other vendors under a VDA 5050 fleet layer, connect the robot to other systems through [the API](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>), or use advanced mission planning. For a single robot doing [teach-and-repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>) transport, [Standard software](https://info.mobilerobot.com/products/software/standard-software/) (<https://info.mobilerobot.com/products/software/standard-software/>) is sufficient — the upgrade path remains open. See the [software comparison](https://info.mobilerobot.com/products/software/software-comparison/) (<https://info.mobilerobot.com/products/software/software-comparison/>).

Fleet Manager

Fleet Manager is per-robot software for orchestrated J1600 deployments. It belongs to the [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>), feature set and is priced per robot, so a fleet's software cost scales with its size.

What it is for

A single J1600 with [Standard software](https://info.mobilerobot.com/products/software/standard-software/) (<https://info.mobilerobot.com/products/software/standard-software/>), runs stand-alone: an operator creates and starts tasks on the touchscreen. Fleet Manager is the step up when an application grows to several robots that need to be coordinated as one deployment rather than operated one by one.

Price

Item	2026 end-user list price
Fleet Manager software, per robot	€6,500

See [Available options](https://info.mobilerobot.com/products/chargers-and-accessories/available-options/) (<https://info.mobilerobot.com/products/chargers-and-accessories/available-options/>) for all list prices.

Setup

Fleet Management System setup is available as an add-on to the [installation and commissioning](https://info.mobilerobot.com/products/buying-and-deployment/installation-and-commissioning/) (<https://info.mobilerobot.com/products/buying-and-deployment/installation-and-commissioning/>), package, alongside [integration with other software and equipment](https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/) (<https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/>) and additional validated drop points.

Mixed fleets and third-party fleet layers

The J1600 also has full [VDA 5050](https://info.mobilerobot.com/products/software/vda-5050/) support under Advanced software, and The Mobile Robot Company works with established VDA 5050 fleet-management providers. That means orchestration is not locked to one product: a J1600 can operate under a compatible third-party fleet layer next to robots from other vendors.

VDA 5050

VDA 5050 is an [interoperability interface](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/) (<https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/>), for multi-vendor mobile-robot fleets. It lets robots from different vendors work together in the same space under a compatible fleet-management layer, instead of each brand requiring its own isolated control system.

J1600 support

The [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>) has full VDA 5050 support. The interface is part of the [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>) package; [Standard software](https://info.mobilerobot.com/products/software/standard-software/) (<https://info.mobilerobot.com/products/software/standard-software/>) does not include it.

The Mobile Robot Company works with established VDA 5050 fleet-management providers, so the J1600 can be brought into an existing VDA 5050 fleet installation rather than requiring a dedicated one.

Why it matters

Many facilities already run, or plan to run, mobile robots from more than one vendor. With VDA 5050:

- the J1600 can coexist with other vendors' robots under one fleet layer;
- traffic and task coordination happen in the fleet manager, not in per-brand silos;
- adding the J1600 to an automated site does not force a rip-and-replace of the existing fleet software.

Getting started

[VDA 5050 operation](https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/>), requires the Advanced software upgrade, which is easiest to install at the factory when the robot is ordered — a partner can add it later, but customers cannot install it themselves. Integration setup can be included as an add-on to [installation and commissioning](https://info.mobilerobot.com/products/buying-and-deployment/) (<https://info.mobilerobot.com/products/buying-and-deployment/>)

[t/installation-and-commissioning/](#)). For terminology, see the [glossary](https://info.mobilerobot.com/documentation/concepts/glossary/) (<https://info.mobilerobot.com/documentation/concepts/glossary/>).

REST API and Integrations

The J1600 treats [systems integration as optional](https://info.mobilerobot.com/applications/results/lower-integration-complexity/), not mandatory. Basic operation with [Standard software](https://info.mobilerobot.com/products/software/standard-software/) requires no warehouse-management system (WMS), no fleet manager, and no IT integration — [Wi-Fi itself is optional](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/). When an application does call for integration, the [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) package provides the interfaces.

Integration is optional by design

Full automation projects often require WMS and fleet integration, expert configuration, and tightly controlled processes before the first pallet moves. The J1600's approach is the reverse: it works out of the box with [teach-and-repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) tasks, and integration is added only when the application grows. This keeps entry cost and [deployment time](https://info.mobilerobot.com/applications/results/faster-deployment/) low for a first robot. See [Human-in-the-loop automation](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/) for the philosophy behind this design.

What Advanced software provides

- **REST API** (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>) — a software interface for integrating the J1600 with other software and equipment.
- **Advanced system integration** — [connecting the robot to other software and equipment](https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/) in the facility.
- **Advanced mission planning** — task behavior beyond the standard patterns.
- **VDA 5050** (<https://info.mobilerobot.com/products/software/vda-5050/>) — the multi-vendor fleet interoperability interface.
- **Fleet Manager** (<https://info.mobilerobot.com/products/software/fleet-manager/>) — orchestration software priced per robot.

Setting up an integration

Integration with other software and equipment is available as an add-on to the [installation and commissioning](https://info.mobilerobot.com/products/buying-and-deployment/installation-and-commissioning/) (<https://info.mobilerobot.com/products/buying-and-deployment/installation-and-commissioning/>) package, together with Fleet Management System setup and additional validated drop points. The Advanced software upgrade itself is easiest to install at the factory when the robot is ordered; a partner can install it later, but customers cannot.

Related connectivity facts

- Wi-Fi is optional for the basic out-of-box workflow and can be connected during installation Day 1 if desired.
- An advanced automation function, [come-to-me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>), lets an operator call the robot to a location using a mobile app or web interface.

Software Comparison

One J1600 hardware platform supports two software versions. This page compares them and shows the broader capability ladder from manual operation to advanced automation.

Standard versus Advanced

	<u>Standard software (https://info.mobilerobot.com/products/software/standard-software/)</u>	<u>Advanced software (https://info.mobilerobot.com/products/software/advanced-software/)</u>
Design goal	Essential functions, maximum ease of use	Fleet operation and system integration
Task creation	Configuration-free Teach and Repeat	Teach and Repeat plus advanced mission planning
Touchscreen task launch and saved locations	Yes (no limit on saved locations)	Yes
Wi-Fi requirement	Optional for basic out-of-box workflow	Optional for basic use; connectivity as integrations require
VDA 5050 interoperability	No	Yes — full support
REST API	No	Yes
Fleet Manager	No	Available, priced per robot
Advanced system integration	No	Yes
Intended deployment	Single unit, no systems integration	Fleets, mixed-vendor sites, integrated processes

Capability ladder

The vehicle's functions build up in three levels. This ladder describes automation capabilities and is separate from the Standard/Advanced package split.

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

See [Dual Mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (https://info.mobilerobot.com/products/j1600/dual-mode/) for how manual and autonomous operation combine in one vehicle, and the [Automatic Charger](https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/) (https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/) page for opportunity charging.

2026 list prices

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

UPGRADE PATH

The Advanced upgrade is easiest to install at the factory when the robot is ordered. A partner can perform it later on an existing robot; customers cannot install it themselves.

Choosing

- **One robot, repetitive transport, fast start:** Standard software covers the full [teach-and-repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) workflow with about 30 minutes of [operator training](https://info.mobilerobot.com/documentation/getting-started/operator-training/).
- **Several robots, mixed-vendor fleet, or system integration:** order the Advanced upgrade, and add [Fleet Manager](https://info.mobilerobot.com/products/software/fleet-manager/) or a compatible [VDA 5050](https://info.mobilerobot.com/products/software/vda-5050/) fleet layer as the deployment requires.

For common capability questions, see the [product FAQ](https://info.mobilerobot.com/support/faq/product-and-capabilities/).

Chargers and Accessories

Charging options and add-ons for the J1600, with 2026 list prices and compatibility details for chargers, pallets, and load carriers.



Manual Charger

The J1600 manual charger works like a conventional pallet-jack charger — plug in during breaks or idle time. 2026 list price €3,600, charging about 47 percentage points per hour.



Automatic Charger

The optional automatic charger lets the J1600 dock and opportunity-charge on its own — the robot positions itself at the station and a charging interface extends to its charging plates...



Available Options

Complete catalog of J1600 options with 2026 end-user list prices — chargers, software upgrades, Fleet Manager, installation, support plans, trials, and typical configuration totals.



Compatibility

What the J1600 can charge with and what it can carry — charger compatibility plus the pallet and load-carrier envelope, including EPAL and GMA pallet support and size limits.

Manual Charger

The manual charger is the simplest way to charge the [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>). It works the way electric-pallet-jack users already expect: plug the charger in during a break or whenever the machine is idle.

How it works

Charging is a plug-in operation performed by the operator — for example before lunch or at the end of a shift. No docking station, floor marking, or software function is involved.

Battery and charging figures

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 without load	approximately 12% per hour
Standby drain	approximately 2% per hour

[Runtime](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/>) exceeds eight hours in a typical duty cycle, so a single-shift operation can usually charge outside working hours or during natural breaks.

Price

Item	2026 end-user list price
Manual charger	€3,600

Chargers are priced separately from the robot. See [Available options](https://info.mobilerobot.com/products/chargers-and-accessories/available-options/) (<https://info.mobilerobot.com/products/chargers-and-accessories/available-options/>) for the full options catalog and [Compatibility](https://info.mobilerobot.com/products/chargers-and-accessories/compatibility/) (<https://info.mobilerobot.com/products/chargers-and-accessories/compatibility/>) for charger and load-carrier compatibility.

When to choose manual charging

Manual charging suits single-robot, single-shift deployments where the robot has predictable idle time. Operations that want the robot to top up on its own between tasks should consider the [automatic charger](https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/) (<https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/>), which enables opportunity charging without operator involvement.

Automatic Charger

The automatic charger is an optional charging station that the [J1600](https://info.mobilerobot.com/products/j1600/overview/) docks with on its own. It removes charging from the operator's task list and enables [opportunity charging](https://info.mobilerobot.com/applications/scenarios/automatic-charging/) whenever the robot is not busy.

How it works

1. The robot drives to the charging station.
2. It positions itself at the charger.
3. A charging interface extends from the station to the charging plates on the vehicle.

Every J1600 carries an automatic-charging interface as part of its hardware. Automatic charging is an advanced automation capability, alongside [come-to-me](https://info.mobilerobot.com/applications/scenarios/come-to-me/), [VDA 5050](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/), fleet management, and [API integrations](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/).

Opportunity charging

Because docking needs no person, the robot can top up between tasks instead of waiting for a scheduled plug-in. Combined with a charging rate of approximately 47 percentage points per hour on the [24 V, 200 Ah LiFePO4 battery](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/), this keeps the vehicle available through the working day. Typical-duty-cycle runtime exceeds eight hours.

Setup

When the automatic charger is purchased, its setup is part of Day 1 of the [installation and commissioning](https://info.mobilerobot.com/products/buying-and-deployment/installation-and-commissioning/) package, together with unboxing, optional Wi-Fi connection, drop-point creation, and task and safety validation.

Safety

The [charging-current relay](https://info.mobilerobot.com/safety-compliance/safety-functions/charging-safety/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/charging-safety/>) is a defined safety function with [Performance Level PL b](https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/>). For the vehicle's complete safety design, see [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/>).

Price

Item	2026 end-user list price
Automatic charger	€8,400

The [manual charger](https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/) (<https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/>) is the lower-cost alternative at €3,600. See [Available options](https://info.mobilerobot.com/products/chargers-and-accessories/available-options/) (<https://info.mobilerobot.com/products/chargers-and-accessories/available-options/>) for all list prices.

Available Options

This page lists everything that can be ordered around a [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>), with 2026 end-user list prices in euros.

LIST PRICES

These are public end-user list prices for 2026 and may change. Orders and quotes are handled through the [local 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/>) — see [Request a quote](https://info.mobilerobot.com/products/buying-and-deployment/request-a-quote/) (<https://info.mobilerobot.com/products/buying-and-deployment/request-a-quote/>).

Price list

Item	End-user list price
J1600 self-driving pallet jack	€65,000
Manual charger (https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/).	€3,600
Automatic charger (https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/).	€8,400
Advanced software upgrade (https://info.mobilerobot.com/products/software/advanced-software/).	€14,500
Fleet Manager, per robot (https://info.mobilerobot.com/products/software/fleet-manager/).	€6,500
Installation and commissioning (https://info.mobilerobot.com/products/buying-and-deployment/installation-and-commissioning/).	€10,000
Basic Care support plan, per robot per year	€4,900
Full Care support plan, per robot per year	€13,000
On-site support, per day plus travel	€2,400
Two-week trial (https://info.mobilerobot.com/products/buying-and-deployment/two-week-trial/), including setup and support	€4,000

Typical configurations

Configuration	List total
J1600 + manual charger + installation and commissioning	€78,600
J1600 + automatic charger + installation and commissioning	€83,400

A typical customer configuration is expected to cost around or below €80,000, which corresponds to the manual-charger configuration. Chargers are priced separately from the robot.

Support plans

Three after-sales plans exist: a Free plan (pay-as-you-go service and parts at list price, first-year warranty, first-year software upgrades, online self-help portal), Basic Care, and Full Care. Customers choose a plan at purchase; an ongoing agreement is optional. Details are covered under [Support](https://info.mobilerobot.com/category/support/) (<https://info.mobilerobot.com/category/support/>).

Software choices

The robot ships with [Standard software](https://info.mobilerobot.com/products/software/standard-software/) (<https://info.mobilerobot.com/products/software/standard-software/>); the [Advanced upgrade](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>) adds [VDA 5050](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/) (<https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/>), a [REST API](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>), Fleet Manager availability, and advanced mission planning. The upgrade is easiest to install at the factory when the robot is ordered. See the [software comparison](https://info.mobilerobot.com/products/software/software-comparison/) (<https://info.mobilerobot.com/products/software/software-comparison/>).

Compatibility

This page covers what works with the [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>): the two charger options and the [pallets and load carriers the vehicle can handle](https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/) (<https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/>).

Charger compatibility

Both chargers work with the J1600's [24 V, 200 Ah lithium-iron-phosphate \(LiFePO4\) battery](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/>):

- The [manual charger](https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/) (<https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/>) (€3,600 list) is plugged in by the operator.
- The [automatic charger](https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/) (<https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/>) (€8,400 list) docks with the automatic-charging interface and charging plates that are part of every J1600.

Charging adds approximately 47 percentage points of charge per hour with either option.

Pallet and load-carrier compatibility

The J1600 requires an **open-base carrier with no bottom deck board** so its forks can enter.

Parameter	Limit or 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 rated payload	1,600 kg / about 3,500 lb
EPAL support	EPAL Euro Pallet, EPAL 3, EPAL 6
GMA support	All GMA pallets with an open base
Custom carriers	Any forkable open-base carrier within the size limits

Supported carriers go beyond Euro pallets: [open cages, barrels, sensitive loads, and other custom 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/>) all qualify when they fit the envelope. Compatibility in practice depends on base geometry, size, load stability, and operator judgment — there is no blanket approval covering every carrier or hazardous material.

MANUAL JUDGMENT FOR DIFFICULT LOADS

Dual mode (<https://info.mobilerobot.com/products/j1600/dual-mode/>) lets the operator handle [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/>) — such as barrels or poorly stacked pallets — manually during pickup and close maneuvering, then hand the long transport leg to autonomous mode.

Fork and vehicle geometry

Fork length is 1,150 mm, fork width 180 mm, fork outer distance 680 mm, and fork inner distance 320 mm. The full dimension set is on the [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>), page.

Operating limits

Autonomous operation is indoor and level-floor (0% automatic gradeability), with an operating temperature of 5–40°C and IP21 ingress protection. See [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>) for the complete environment requirements.

Buying and Deployment

How to evaluate, buy, and deploy the J1600 — demonstrations, trials, proofs of concept, commissioning, local partners, and quotes.



Request a Demonstration

How to get a hands-on J1600 demonstration — a 30–60 minute session at a partner experience center or your own site, where first-time users typically launch an autonomous tas...



Two-Week Trial

The J1600 two-week paid trial costs €4,000 including setup and support — 14 calendar days at your facility with a deployment day, unlimited remote support, weekly check-ins, and free...



Proof of Concept

How to run a J1600 proof of concept — test at the Copenhagen demo and test area under real-world conditions, or have machines brought to your own plant for on-site validation.



Installation and Commissioning

The J1600 installation and commissioning package — a fixed-price €10,000 five-day deployment with feasibility check, up to 25 drop points, operator training, validation,...



Find a Local Partner

The J1600 is sold, demonstrated, and serviced through a worldwide partner network — how to get connected to a distributor, integrator, or service partner in your country.



Request a Quote

How to get a J1600 quote — public 2026 list prices from €65,000, what to decide before requesting an offer, and how inquiries are routed to a local partner.

Request a Demonstration

A demonstration is the first step in evaluating the [J1600](https://info.mobilerobot.com/products/j1600/overview/): a hands-on session where you drive the vehicle manually, [save a location](https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/), and send it on an autonomous task yourself.

What a demonstration looks like

- **Duration:** 30–60 minutes of hands-on use.
- **Location:** a partner experience center — a showroom with a dedicated robot, pallets, and chargers — or your own site.
- **Content:** manual driving with the tiller, saving a location on the touchscreen, creating a task, confirming autonomous mode, and watching the robot deliver a pallet and return.

The point of the format is ease of use: a first-time user can typically see the robot, learn the interface, and send it on an autonomous task within about 15 minutes. At a public test event, [a first-time user who had only used conventional electric pallet jacks](https://info.mobilerobot.com/applications/customer-stories/video-case-stories/) saved a location, created a drop-and-return task, and watched the robot navigate around people.

How to request one

Demonstrations are delivered through the local partner network. Request one via www.mobilerobot.com or by writing to hello@mobilerobot.com; the inquiry is routed to a partner near you. See [Find a local partner](https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/).

After the demonstration

The standard evaluation path continues with a [two-week trial](https://info.mobilerobot.com/products/buying-and-deployment/two-week-trial/), at your own facility, or a [proof of concept](https://info.mobilerobot.com/products/buying-and-deployment/proof-of-concept/) for

applications that need deeper validation. Repeat customers can skip the demonstration and trial and go straight to purchase — see [Request a quote](https://info.mobilerobot.com/products/buying-and-deployment/request-a-quote/) (<https://info.mobilerobot.com/products/buying-and-deployment/request-a-quote/>).

Two-Week Trial

The paid trial puts a [J1600](https://info.mobilerobot.com/products/j1600/overview/) in your own facility for 14 calendar days, so you can validate the application with your pallets, floors, and people before buying.

What is included

- **Pre-trial feasibility assessment and task selection** through a company-provided online tool.
- **Robot loan for 14 calendar days.**
- **One full day of on-site deployment and training support** — the robot is set up and your operators are trained at the start of the trial.
- **Unlimited remote support** from The Mobile Robot Company throughout the trial.
- **Weekly check-in**, online or face to face, delivered by [the local partner](https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/) to assess trial progress.
- **Free return at any time, no questions asked.**

Price

Item	2026 end-user list price
Two-week trial, including setup and support	€4,000

Why a paid trial

The trial is designed to reduce adoption risk: two weeks is long enough to run real transport tasks in daily operation, and the no-questions-asked return removes the downside if [the fit is wrong](https://info.mobilerobot.com/applications/planning/is-the-j1600-right-for-my-application/). [Setup](https://info.mobilerobot.com/documentation/getting-started/first-time-setup/) is fast because the J1600 needs no building modifications, tracks, wires, or reflectors, and [operator training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) takes about 30 minutes.

Where it fits in the customer journey

The [standard evaluation path](https://info.mobilerobot.com/company/about/business-model/) (<https://info.mobilerobot.com/company/about/business-model/>) is [demonstration](https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/) (<https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/>) → trial → purchase → after-sales agreement. The demonstration and trial can be skipped, for example by repeat customers. For deeper validation of a specific application, see [Proof of concept](https://info.mobilerobot.com/products/buying-and-deployment/proof-of-concept/) (<https://info.mobilerobot.com/products/buying-and-deployment/proof-of-concept/>); when you are ready to buy, see [Request a quote](https://info.mobilerobot.com/products/buying-and-deployment/request-a-quote/) (<https://info.mobilerobot.com/products/buying-and-deployment/request-a-quote/>).

Proof of Concept

A proof of concept (POC) is on-site validation of a specific J1600 application before wider purchase or deployment. It goes deeper than a [demonstration](https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/) or a standard [two-week trial](https://info.mobilerobot.com/products/buying-and-deployment/two-week-trial/) and is shaped around your application.

Two ways to run a POC

Test in Copenhagen. Prospects can run tests at The Mobile Robot Company's [Copenhagen demo and test area](https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/). The facility is set up for validation under intentionally real-world conditions, including uneven flooring, water-filled loads, and multiple test setups — not a polished showroom floor.

Test at your plant. Machines can be transported to your own facility, so the POC runs with your actual pallets, layout, and material flow. Plant trials and POCs are supported by the distributor and integrator network.

How to arrange one

Discuss a POC with the sales and technical team via hello@mobilerobot.com or www.mobilerobot.com, or with your local partner — see [Find a local partner](https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/). Scope, location, and setup are agreed case by case.

What a POC typically examines

POCs suit applications where standard evaluation leaves open questions, for example:

- carrier compatibility beyond standard Euro pallets — [open cages, barrels, and other open-base carriers](https://info.mobilerobot.com/applications/use-cases/open-cages-and-alternative-load-carriers/) within the [compatibility envelope](https://info.mobilerobot.com/products/chargers-and-accessories/compatibility/);

- [floor conditions](https://info.mobilerobot.com/documentation/installation/floor-requirements/) (<https://info.mobilerobot.com/documentation/installation/floor-requirements/>), route lengths, and traffic in the real facility;
- [task patterns](https://info.mobilerobot.com/documentation/user-guides/task-management/) (<https://info.mobilerobot.com/documentation/user-guides/task-management/>) and post-delivery behavior for the intended flow;
- fit with a planned [software configuration](https://info.mobilerobot.com/products/software/software-comparison/) (<https://info.mobilerobot.com/products/software/software-comparison/>), such as fleet operation or integrations.

After the POC

A successful POC normally leads to purchase and, where chosen, formal [installation and commissioning](https://info.mobilerobot.com/products/buying-and-deployment/installation-and-commissioning/) (<https://info.mobilerobot.com/products/buying-and-deployment/installation-and-commissioning/>). See [Request a quote](https://info.mobilerobot.com/products/buying-and-deployment/request-a-quote/) (<https://info.mobilerobot.com/products/buying-and-deployment/request-a-quote/>).

Installation and Commissioning

Installation and commissioning is a fixed-price deployment package for the [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>). It is an optional service: the standard robot is [usable out of the box](https://info.mobilerobot.com/documentation/getting-started/first-time-setup/) (<https://info.mobilerobot.com/documentation/getting-started/first-time-setup/>) with about 30 minutes of [operator training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>) and [setup in hours or one day](https://info.mobilerobot.com/applications/results/faster-deployment/) (<https://info.mobilerobot.com/applications/results/faster-deployment/>). The package exists to reduce go-live risk with structured [site preparation](https://info.mobilerobot.com/documentation/installation/site-readiness-guide/) (<https://info.mobilerobot.com/documentation/installation/site-readiness-guide/>), training, validation, and a formal handover.

Price

Item	2026 end-user list price
Installation and commissioning	€10,000

What the package covers

Pre-installation

- Feasibility check for all selected tasks and loads.
- [Risk assessment](https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/>).
- Project plan.

On-site Day 1

- [Unboxing](https://info.mobilerobot.com/documentation/getting-started/delivery-and-unpacking/) (<https://info.mobilerobot.com/documentation/getting-started/delivery-and-unpacking/>).
- Wi-Fi connection, if desired — [Wi-Fi is optional for basic use](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>).
- Automatic-charging setup, if an [automatic charger](https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/) (<https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/>) was purchased.

- Creation of up to 25 [drop points](https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/) (<https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/>).
- Task validation and safety validation.

On-site Day 2

- Group training for all operators.
- Individual hands-on practice for up to six operators.

On-site Days 3–4

- Monitoring of robot performance.
- On-site troubleshooting and support.
- Additional operator training as needed.

On-site Day 5

- Acceptance test.
- Handover.

Add-ons

- Integration with other software or equipment — see [REST API and integrations](https://info.mobilerobot.com/products/software/rest-api-and-integrations/) (<https://info.mobilerobot.com/products/software/rest-api-and-integrations/>).
- Additional validated drop points beyond the included 25.
- Fleet Management System setup — see [Fleet Manager](https://info.mobilerobot.com/products/software/fleet-manager/) (<https://info.mobilerobot.com/products/software/fleet-manager/>).

Commissioned versus out-of-box deployment

	Out of the box	With commissioning package
Setup effort	Hours to one day, done by your own team with the on-device tutorial	Five structured on-site days by trained personnel
Drop points	Added by operators as needed (no software limit)	Up to 25 validated points at go-live
Training	About 30 minutes per operator	Group training plus individual practice for up to six operators
Validation	Operator judgment	Formal task validation, safety validation, and acceptance test

Ordering and delivery run through the local partner network — see [Find a local partner](https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/) (<https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/>) and [Request a quote](https://info.mobilerobot.com/products/buying-and-deployment/request-a-quote/) (<https://info.mobilerobot.com/products/buying-and-deployment/request-a-quote/>).

Find a Local Partner

The Mobile Robot Company does not sell robots directly to end users (<https://info.mobilerobot.com/company/about/business-model/>). Demonstrations, trials, sales, installation, and service are delivered by local distributors, integrators, and service partners (<https://info.mobilerobot.com/partners/program/partner-types/>), while the company supplies robots, parts, software, training, and technical support behind them.

Where partners operate

The J1600 is available worldwide (<https://info.mobilerobot.com/partners/become-a-partner/country-availability/>), including in the United States, Canada, Australia, and China. By June 2026, distributor partnerships existed in eight countries and the network was expanding. Confirm country-specific partners, prices, taxes, service coverage, and delivery times with the company or your local partner.

What a partner does for you

- runs hands-on demonstrations (<https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/>) at an experience center — a showroom with a dedicated robot, pallets, and chargers — or at your site;
- delivers two-week trials (<https://info.mobilerobot.com/products/buying-and-deployment/two-week-trial/>) and supports proofs of concept (<https://info.mobilerobot.com/products/buying-and-deployment/proof-of-concept/>) at your plant;
- handles the purchase (<https://info.mobilerobot.com/products/buying-and-deployment/request-a-quote/>) and, where chosen, installation and commissioning (<https://info.mobilerobot.com/products/buying-and-deployment/installation-and-commissioning/>);
- provides local after-sales service, backed by the company's parts, software, and remote support.

How to get connected

Submit an inquiry at www.mobilerobot.com (<https://www.mobilerobot.com>) or write to hello@mobilerobot.com. Customer inquiries are assigned through the partner network, so you are put in contact with a partner serving your area.

Becoming a partner

Qualified integrators, distributors, and service partners (<https://info.mobilerobot.com/partners/become-a-partner/who-we-are-looking-for/>). can apply by country (<https://info.mobilerobot.com/partners/program/application-process/>) to join the network. See the Partners (<https://info.mobilerobot.com/category/partners/>) section for the partner program.

Request a Quote

J1600 list prices (<https://info.mobilerobot.com/products/j1600/pricing-and-roi/>) are public, so you can estimate a configuration (<https://info.mobilerobot.com/products/chargers-and-accessories/available-options/>) before talking to anyone. The quote itself comes from a local partner: The Mobile Robot Company routes customer inquiries through its partner network (<https://info.mobilerobot.com/company/about/business-model/>), rather than selling directly.

2026 end-user list prices

Item	List price
J1600 self-driving pallet jack	€65,000
Manual charger	€3,600
Automatic charger	€8,400
Advanced software upgrade	€14,500
Fleet Manager, per robot	€6,500
Installation and commissioning	€10,000
Basic Care support plan, per robot per year	€4,900
Full Care support plan, per robot per year	€13,000
Two-week trial, including setup and support	€4,000

PRICES MAY CHANGE

These are 2026 list prices in euros. Country-specific prices, taxes, and delivery terms (<https://info.mobilerobot.com/partners/become-a-partner/country-availability/>) are confirmed by your local partner.

Typical configuration totals

- J1600 + manual charger + installation and commissioning: **€78,600** list.
- J1600 + automatic charger + installation and commissioning: **€83,400** list.

A typical customer configuration is expected to land around or below €80,000.

Decide before you ask

A complete quote covers four choices:

1. **Charger:** [manual](https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/) (https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/) or [automatic](https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/) (https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/). Chargers are priced separately from the robot.
2. **Software:** [Standard](https://info.mobilerobot.com/products/software/standard-software/) (https://info.mobilerobot.com/products/software/standard-software/) or the [Advanced upgrade](https://info.mobilerobot.com/products/software/advanced-software/) (https://info.mobilerobot.com/products/software/advanced-software/) — the upgrade is easiest to install at the factory when the robot is ordered.
3. **Deployment** (<https://info.mobilerobot.com/applications/planning/deployment-scope-examples/>): [out-of-box setup](https://info.mobilerobot.com/documentation/getting-started/first-time-setup/) (https://info.mobilerobot.com/documentation/getting-started/first-time-setup/) by your own team, or the five-day [installation and commissioning](https://info.mobilerobot.com/products/buying-and-deployment/installation-and-commissioning/) (https://info.mobilerobot.com/products/buying-and-deployment/installation-and-commissioning/) package.
4. **Support plan:** chosen at purchase — Free, Basic Care, or Full Care. See [Support](https://info.mobilerobot.com/category/support/) (https://info.mobilerobot.com/category/support/).

How to request

Use the offer form at www.mobilerobot.com (https://www.mobilerobot.com) (name, email address, and company name) or write to hello@mobilerobot.com. The inquiry is assigned to a partner near you — see [Find a local partner](https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/) (https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/). If you have not yet evaluated the robot, start with a [demonstration](https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/) (https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/) or a [two-week trial](https://info.mobilerobot.com/products/buying-and-deployment/two-week-trial/) (https://info.mobilerobot.com/products/buying-and-deployment/two-week-trial/); repeat customers can skip both and buy directly.

Documentation

Guides, manuals, technical integration, service, and reference material for the J1600.



Getting Started

8 pages



User and Operator Guides

9 pages



Installation and Commissioning

8 pages



Technical Integration

8 pages



Service and Maintenance

3 pages



Technical Reference

5 pages



Concepts and Terminology

7 pages

Getting Started

From delivery to the first autonomous pallet delivery: unpacking, setup, mapping, locations, tasks, and operator training for the J1600.



J1600 Quick Start Guide

The complete path from powering on a new J1600 to its first autonomous pallet delivery — mapping, saving locations, creating a task, and confirming autonomous mode.



Delivery and Unpacking

What to prepare before a J1600 arrives, key weights and dimensions for receiving, what is included with a purchase, and the optional commissioning service.



First-Time Setup

Setting up a new J1600 — power-on, the on-screen tutorial, mapping by driving, saving locations, and the optional five-day commissioning package.



Operator Training

How long J1600 operator training takes, what it covers, the on-device tutorial, and the structured training included in the commissioning package.



Creating the First Map

How the J1600 builds its 3D map of a facility by being driven manually, with no tracks, wires, reflectors, or building modifications.



Saving the First Location

How to create a saved delivery location on the J1600 by driving to the point and tapping Save Location, and how saved locations behave.



Creating the First Task

Step-by-step creation of the first J1600 task — choosing a destination and post-delivery behavior, confirming autonomous mode, and what the robot does.



Manual and Autonomous Modes

How the J1600's dual mode works — manual pallet-jack operation, operator-confirmed autonomous mode, the key switch, handover, and immediate takeover.

J1600 Quick Start Guide

This guide takes you from a newly delivered J1600 to its first autonomous pallet delivery. [The J1600](https://info.mobilerobot.com/products/j1600/overview/) is ready to use on delivery: it needs no tracks, wires, reflectors, or building modifications, and [Wi-Fi is optional for basic use](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/). Typical setup takes hours or one day, [depending on scope](https://info.mobilerobot.com/applications/planning/deployment-scope-examples/), and an operator who already drives an electric pallet jack needs about 30 minutes of training.

The basic workflow is: **map by driving, save destinations, pick manually, and deliver autonomously** (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>).

Before you start

Check that your facility and loads [fit the J1600's operating envelope](https://info.mobilerobot.com/applications/planning/is-the-j1600-right-for-my-application/):

- Indoor, floor-to-floor transport on [level floors](https://info.mobilerobot.com/documentation/installation/floor-requirements/). Autonomous mode has 0% gradeability; slopes and dock plates are manual-mode work.
- [Operating temperature](https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/) 5–40 °C (41–104 °F), relative humidity 20–80% non-condensing.
- Pallets and load carriers must have an open base with no bottom deck board, within 1,250 × 1,250 mm (49 × 49 in) including overhang and a maximum load height of 1,700 mm (67 in). See [Supported Pallets and Loads](https://info.mobilerobot.com/documentation/user-guides/supported-pallets-and-loads/).
- Maximum payload is 1,600 kg (about 3,500 lb).

For receiving and unboxing, see [Delivery and Unpacking](https://info.mobilerobot.com/documentation/getting-started/delivery-and-unpacking/).

Step 1 — Power on and follow the tutorial

Turn the key switch to power the robot on and follow the on-screen tutorial on the [15-inch touchscreen](https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/>). The tutorial is available on the device and online.

Step 2 — Map the facility by driving

Use the tiller to drive the J1600 manually through your facility, exactly as you would drive a conventional electric pallet jack. While you drive, the robot builds and continuously updates a three-dimensional map of the environment using [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>) (simultaneous localization and mapping). No infrastructure changes are needed. See [Creating the First Map](https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/) (<https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/>).

Step 3 — Save your destinations

Drive to each point where you want the robot to deliver pallets autonomously, tap **Save location** on the touchscreen, and name the point. Repeat for every destination you need — there is no software limit on the number of saved locations. See [Saving the First Location](https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/) (<https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/>).

Step 4 — Pick up a pallet manually

[Pallet pickup is always manual](https://info.mobilerobot.com/support/troubleshooting/task-and-location-problems/) (<https://info.mobilerobot.com/support/troubleshooting/task-and-location-problems/>). Use the tiller and lift controls to pick up a supported pallet or load carrier. [Manual mode](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>) handles picks and drops at heights up to 1,600 mm (63 in).

Step 5 — Create and run the first task

1. Open task creation on the touchscreen.
2. Choose the task type and a saved drop destination.

3. Choose what happens after delivery: return to origin, go to another point or parking, or [stop and wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/>).
4. Execute the task.
5. The robot asks to [enter automatic mode](https://info.mobilerobot.com/support/troubleshooting/robot-will-not-enter-autonomous-mode/) (<https://info.mobilerobot.com/support/troubleshooting/robot-will-not-enter-autonomous-mode/>). Confirm with the physical start/go button.
6. Step away when the interface tells you to.

The J1600 [drives autonomously](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>) at up to 5.4 km/h, avoids obstacles on the way, drops the pallet at floor level, and performs the post-delivery action you selected. See [Creating the First Task](https://info.mobilerobot.com/documentation/getting-started/creating-the-first-task/) (<https://info.mobilerobot.com/documentation/getting-started/creating-the-first-task/>).

Taking back control

You can regain manual control at any time by grabbing or moving the tiller, or by using the stop and override controls. [The operator always initiates tasks and decides when the machine may enter autonomous mode](https://info.mobilerobot.com/safety-compliance/safety-overview/human-responsibilities/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/human-responsibilities/>). See [Manual and Autonomous Modes](https://info.mobilerobot.com/documentation/getting-started/manual-and-autonomous-modes/) (<https://info.mobilerobot.com/documentation/getting-started/manual-and-autonomous-modes/>).

PRELIMINARY SPECIFICATIONS

The January 2026 J1600 specifications referenced in this guide are preliminary and subject to change. See the [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>) for the current figures.

Where to go next

- [First-Time Setup](https://info.mobilerobot.com/documentation/getting-started/first-time-setup/) (<https://info.mobilerobot.com/documentation/getting-started/first-time-setup/>) — the setup process in more detail, including the optional commissioning package.
- [Operator Training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>) — what operators need to learn and how long it takes.
- [Task Management](https://info.mobilerobot.com/documentation/user-guides/task-management/) (<https://info.mobilerobot.com/documentation/user-guides/task-management/>) — all task patterns beyond the first delivery.

- [Charging \(https://info.mobilerobot.com/documentation/user-guides/charging/\)](https://info.mobilerobot.com/documentation/user-guides/charging/) — manual and automatic charging options.

Delivery and Unpacking

This page covers what to expect when a J1600 arrives at your site and [what to have ready before it does](https://info.mobilerobot.com/documentation/installation/site-readiness-guide/) (<https://info.mobilerobot.com/documentation/installation/site-readiness-guide/>). The J1600 is designed to be ready to use on delivery: it works out of the box, requires no building modifications, and does not need [Wi-Fi or IT integration for basic use](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>).

Receiving data

Plan the receiving area and handling equipment around these figures:

Parameter	Value
Truck weight	980 kg
Vehicle length	1,893 mm (75 in)
Vehicle width	850 mm (33 in)
Vehicle height, forks lowered	2,060 mm (81 in)

The J1600 is manufactured in Denmark.

What is included

The base purchase is the J1600 robot itself. A charger is not included with the robot purchase — [order the charger you need](https://info.mobilerobot.com/documentation/installation/charger-installation/) (<https://info.mobilerobot.com/documentation/installation/charger-installation/>) alongside the robot:

- **Manual charger** (<https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/>) — €3,600 list. Plug-in charging, familiar from conventional electric pallet jacks.
- **Automatic charger** (<https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/>) — €8,400 list. Enables self-docking opportunity charging; an advanced automation capability.

See [Charging](https://info.mobilerobot.com/documentation/user-guides/charging/) (https://info.mobilerobot.com/documentation/user-guides/charging/) for how both options work.

Where to place the robot

The J1600 is an indoor vehicle for level floors:

- Operating temperature 5–40 °C (41–104 °F); relative humidity 20–80%, non-condensing.
- Ingress protection IP21 — protected against objects over 12.5 mm and vertically dripping water. Keep it out of wet processes and outdoor exposure.
- [Floor flatness](https://info.mobilerobot.com/documentation/installation/floor-requirements/) (https://info.mobilerobot.com/documentation/installation/floor-requirements/), to TR34 FM3 (FF 25 / FL 20); it traverses bumps up to 25 mm (1 in) and gaps up to 20 mm (0.8 in).

See [Operating environment details](https://info.mobilerobot.com/documentation/user-guides/j1600-user-manual/#operating-limits) (https://info.mobilerobot.com/documentation/user-guides/j1600-user-manual/#operating-limits) in the user manual.

Unpacking and first power-on

After unpacking, the robot is operational without further installation work. Power it on with the key switch and follow the on-screen tutorial — [First-Time Setup](https://info.mobilerobot.com/documentation/getting-started/first-time-setup/) (https://info.mobilerobot.com/documentation/getting-started/first-time-setup/) walks through the process.

Optional installation and commissioning

If you prefer a structured go-live instead of self-setup, a five-day installation and commissioning package is available at €10,000 list. Day 1 covers unboxing, optional Wi-Fi connection, charger setup (including automatic charging if purchased), creation of up to 25 drop points, and task and safety validation. The remaining days cover [operator training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (https://info.mobilerobot.com/documentation/getting-started/operator-training/), monitoring, troubleshooting, acceptance testing, and handover. See [First-Time Setup](https://info.mobilerobot.com/documentation/getting-started/first-time-setup/#the-commissioning-package) (https://info.mobilerobot.com/documentation/getting-started/first-time-setup/#the-commissioning-package) for the full day-by-day scope.

Next step

Continue with [First-Time Setup](https://info.mobilerobot.com/documentation/getting-started/first-time-setup/) (<https://info.mobilerobot.com/documentation/getting-started/first-time-setup/>).

First-Time Setup

Setting up a J1600 is a no-code process an operator performs directly on the machine. Typical setup takes hours or one day, [depending on scope](https://info.mobilerobot.com/applications/planning/deployment-scope-examples/) (<https://info.mobilerobot.com/applications/planning/deployment-scope-examples/>). This page covers the self-setup path and the optional commissioning service.

What setup does not require

- No building modifications: no tracks, wires, reflectors, or markers.
- No mandatory Wi-Fi. [Connectivity is optional for basic use](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>).
- [No warehouse-management system \(WMS\), fleet manager, or IT integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>).
- No programming. [Task creation](https://info.mobilerobot.com/documentation/user-guides/task-management/) (<https://info.mobilerobot.com/documentation/user-guides/task-management/>) is [teach-and-repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>) on the touchscreen.

Self-setup steps

1. **Power on** the J1600 with the key switch and follow the on-screen tutorial. The tutorial is also available online.
2. **Drive the facility manually** with the tiller. The robot continuously learns and updates its 3D understanding of the environment while you drive. See [Creating the First Map](https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/) (<https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/>).
3. **Drive to each desired autonomous drop point** (<https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/>). Autonomous delivery is at floor level, so choose floor-drop positions.
4. **Tap Save location**, name the point, and repeat for every destination. There is no software limit on the number of saved locations. See [Saving the First Location](https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/) (<https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/>).

After the locations exist, the robot is ready for its first task: pick a pallet manually, select a destination, and [confirm autonomous mode](https://info.mobilerobot.com/document) (<https://info.mobilerobot.com/document>

ation/user-guides/autonomous-operation/). See [Creating the First Task](https://info.mobilerobot.com/documentation/getting-started/creating-the-first-task/) (https://info.mobilerobot.com/documentation/getting-started/creating-the-first-task/).

Adding and changing locations later

Locations are not fixed at setup time. Operators add a new point in minutes by driving to it once and saving it — no automation expert needed. This makes the J1600 suitable for changing layouts, [temporary storage points](https://info.mobilerobot.com/applications/use-cases/temporary-storage/) (https://info.mobilerobot.com/applications/use-cases/temporary-storage/), and [brownfield sites](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) (https://info.mobilerobot.com/applications/use-cases/brownfield-automation/). See [Location Management](https://info.mobilerobot.com/documentation/user-guides/location-management/) (https://info.mobilerobot.com/documentation/user-guides/location-management/).

The commissioning package

A separate five-day [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/) (€10,000 end-user list price) is available for customers who want a structured, validated go-live. It should not be confused with the machine's basic out-of-box usability — it is an optional service intended to reduce go-live risk.

Phase	Scope
Pre-installation	Feasibility check for all selected tasks and loads; risk assessment; project plan
Day 1	Unboxing; Wi-Fi connection if desired; automatic-charging setup if purchased; creation of up to 25 drop points; task validation; safety validation
Day 2	Group training for all operators; individual hands-on practice for up to six operators
Days 3–4	Monitoring of robot performance; on-site troubleshooting and support; additional operator training as needed
Day 5	Acceptance test; handover

Add-ons include [integration with other software and equipment](https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/) (https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/), additional validated

drop points, and [Fleet Management System setup](https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/) (https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/).

Trying before deploying

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/) (€4,000 including setup and support) is available, and proofs of concept can be run at your own plant or in 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/). Contact points are listed at [mobilerobot.com](https://www.mobilerobot.com) (https://www.mobilerobot.com).

Next steps

- [Operator Training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (https://info.mobilerobot.com/documentation/getting-started/operator-training/)
- [Creating the First Map](https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/) (https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/)
- [Manual and Autonomous Modes](https://info.mobilerobot.com/documentation/getting-started/manual-and-autonomous-modes/) (https://info.mobilerobot.com/documentation/getting-started/manual-and-autonomous-modes/)

Operator Training

The J1600 is designed so that an existing electric pallet-jack operator can learn it in about 30 minutes. Training is operator-centric and no-code: nothing in standard use requires programming skills or an automation specialist.

Why training is short

- **Manual mode is familiar.** The tiller and manual behavior are designed to feel like a conventional electric pallet jack. An operator who drives one already knows most of the machine.
- **Tasks are no-code.** Creating a task means choosing a saved destination and a post-delivery behavior on the [15-inch touchscreen](https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/) — [teach-and-repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/), not configuration.
- **The interface guides the operator.** The robot asks for confirmation before [entering automatic mode](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) and instructs the operator to step clear before it starts.

A first-time user who had previously driven electric pallet jacks — but never the J1600 — has [publicly demonstrated](https://info.mobilerobot.com/applications/customer-stories/video-case-stories/) saving a location, creating a drop-and-return task, confirming automatic mode, and watching the robot navigate around people, within roughly 15 minutes of first contact.

What an operator learns

1. Driving and lifting in [manual mode](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (picks and drops up to 1,600 mm).
2. Saving and naming locations — see [Saving the First Location](https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/).
3. Creating tasks and choosing post-delivery behavior — see [Creating the First Task](https://info.mobilerobot.com/documentation/getting-started/creating-the-first-task/).
4. The mode handover: confirming automatic mode with the physical start/go button and stepping away — see [Manual and Autonomous Modes](https://info.mobilerobot.com/documentation/getting-started/manual-and-autonomous-modes/).

5. Taking back control: grabbing or moving the tiller, stop and override controls, and the [emergency stops](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/>).
6. Charging routines — see [Charging](https://info.mobilerobot.com/documentation/user-guides/charging/) (<https://info.mobilerobot.com/documentation/user-guides/charging/>).

Training materials

An operator tutorial runs on the device itself and is also available online. [Short public tutorial videos](https://info.mobilerobot.com/newsroom/videos/how-to-videos/) (<https://info.mobilerobot.com/newsroom/videos/how-to-videos/>) cover adding drop locations, creating tasks, and charging.

Structured training in the commissioning package

The optional five-day [installation and commissioning package](https://info.mobilerobot.com/documentation/getting-started/first-time-setup/#the-commissioning-package) (<https://info.mobilerobot.com/documentation/getting-started/first-time-setup/#the-commissioning-package>) includes formal training:

- **Day 2:** group training for all operators, plus individual hands-on practice for up to six operators.
- **Days 3–4:** additional operator training as needed, alongside performance monitoring and troubleshooting.

The operator's ongoing role

Training is short, but the operator's role stays central: judging load stability and pallet condition, performing all pickups, [handling exceptions](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/) (<https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/>), and deciding when the machine may run autonomously. See [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/>) and the [Operator Manual](https://info.mobilerobot.com/documentation/user-guides/operator-manual/) (<https://info.mobilerobot.com/documentation/user-guides/operator-manual/>).

Creating the First Map

The J1600 learns your facility by being driven through it. There is no separate surveying step, no fixed infrastructure, and no map-editing software to master: you drive, the robot maps.

How mapping works

The J1600 navigates with **3D LiDAR SLAM** (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>) (simultaneous localization and mapping) processed on an industrial NVIDIA Jetson AI computer. While an operator drives manually with the tiller, the robot builds a three-dimensional map of its surroundings and keeps updating it continuously during later manual driving. It scans environmental structures at heights reaching up to 70 m above the vehicle.

3D mapping is designed for greater precision and reliability than traditional 2D navigation in complex or changing environments, which makes it suited to [brownfield sites](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>) where layouts shift and obstacles move.

Mapping the facility

1. Power on the robot and complete the on-screen tutorial if you have not already.
2. Drive the J1600 manually through the areas where it will work. It handles like a conventional electric pallet jack.
3. Drive to each intended autonomous drop point and save it — see [Saving the First Location](https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/) (<https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/>).

The robot then localizes itself in the map and plans its own routes to saved destinations. You do not teach routes point-to-point: once locations exist, the robot navigates to any saved point without demonstrating every possible origin–destination combination.

No infrastructure changes

Mapping requires no tracks, wires, reflectors, markers, or building modifications, and [no Wi-Fi](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/). This keeps deployment to hours or a day and allows the robot to move between facilities or areas by [remapping](https://info.mobilerobot.com/support/troubleshooting/mapping-problems/), rather than re-engineering.

Mapping versus safety sensing

The 3D LiDAR and RGB AI camera belong to the navigation stack. [Personnel protection is handled separately](https://info.mobilerobot.com/safety-compliance/safety-overview/navigation-sensors-vs-safety-sensors/) by two 2D safety LiDARs, certified components, and an independent safety controller — see [How J1600 safety works](https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/).

When the environment changes

The map is not frozen at setup. The robot continuously updates its environment model during manual driving, detects and avoids obstacles during autonomous travel, and lets operators add new locations at any time. Preferred travel zones can be defined for safer routing through production areas.

Next step

[Saving the First Location](https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/).

Saving the First Location

A location is a saved destination the J1600 can drive to autonomously. Creating one takes minutes and requires no code or expert help: drive there once and save it.

Creating a location

1. Use the tiller to drive the J1600 manually to the exact point where you want autonomous pallet drops. The robot delivers at floor level in automatic mode, so pick a clear floor position.
2. Tap **Save location** on the touchscreen.
3. Name the point something recognizable — for example `pallet1` or "Pallet Bay 1".
4. Repeat for every destination you need.

How locations behave

- **No software limit.** You can save as many locations as you want; the practical limit is your available warehouse space.
- **Freely combinable.** Any saved point can serve as a destination in any task. You do not need to demonstrate every A-to-B combination — the robot plans its own route between saved points on the map it built while you drove. See [Creating the First Map](https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/) (<https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/>).
- **Easy to change.** [Add a new point in minutes whenever demand changes](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>) — a [temporary storage area](https://info.mobilerobot.com/applications/use-cases/temporary-storage/) (<https://info.mobilerobot.com/applications/use-cases/temporary-storage/>), a new staging lane, a different production-line drop. This is one of the situations where a person beats a fixed automation project: you drive and save instead of calling IT to reprogram a map.
- **Parking included.** Locations can also serve as [parking points](https://info.mobilerobot.com/applications/scenarios/deliver-and-park/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-park/>) the robot proceeds to after a delivery.

Using the first location

With at least one location saved, you can create the first task: pick up a pallet manually, choose the location as the drop destination, and [confirm autonomous mode](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>). Continue with [Creating the First Task](https://info.mobilerobot.com/documentation/getting-started/creating-the-first-task/) (<https://info.mobilerobot.com/documentation/getting-started/creating-the-first-task/>).

For ongoing management of a growing set of locations, see [Location Management](https://info.mobilerobot.com/documentation/user-guides/location-management/) (<https://info.mobilerobot.com/documentation/user-guides/location-management/>).

Creating the First Task

A task tells the J1600 where to deliver a pallet and what to do afterwards. This page walks through the first delivery from manual pickup to autonomous drop. You need at least one saved location first — see [Saving the First Location](https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/) (<https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/>).

Running the first delivery

1. **Pick up a supported pallet manually.** Pickup is always a [manual operation](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>); use the tiller and lift controls as you would on a conventional electric pallet jack.
2. **Open task creation** on the 15-inch touchscreen.
3. **Choose the task type and the saved drop destination** — for example "Drop Pallet at Location" and the point you saved.
4. **Choose what happens after delivery:**
 - return to the origin or operator;
 - go to another saved point or a parking location;
 - stop and wait at the destination.
5. **Execute the task.**
6. **Confirm automatic mode.** The robot asks to [enter automatic mode](https://info.mobilerobot.com/support/troubleshooting/robot-will-not-enter-autonomous-mode/) (<https://info.mobilerobot.com/support/troubleshooting/robot-will-not-enter-autonomous-mode/>); you confirm with the physical LED start/go button.
7. **Step away.** The interface instructs you to step clear before the robot moves.
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 on the way, drops the pallet at floor level, and performs the post-delivery action you selected.

The most common task in practice is exactly this pattern: [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 well over 100 meters — the concept is the same.

What to expect while it runs

- White lights indicate manual mode; blue floor-light strips in automatic mode show the protected area around the robot.
- The [protective safety field adjusts with speed](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) and expands as the robot travels faster.
- You can take over at any time by grabbing or moving the tiller or using the stop controls. See [Manual and Autonomous Modes](https://info.mobilerobot.com/documentation/getting-started/manual-and-autonomous-modes/).

Task rules to remember

- [Pallet pickup is always manual](https://info.mobilerobot.com/support/troubleshooting/task-and-location-problems/).
- Autonomous delivery is at floor level. Picks and drops above floor level, up to 1,600 mm, are manual capabilities.
- Autonomous driving requires [level floors](https://info.mobilerobot.com/documentation/installation/floor-requirements/) (0% gradeability in automatic mode).

Beyond the first task

The J1600 supports several named task patterns — [Boomerang](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/), [Simple ABC](https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/), [drop and wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/), [deliver and park](https://info.mobilerobot.com/applications/scenarios/deliver-and-park/), [come to me](https://info.mobilerobot.com/applications/scenarios/come-to-me/), and [multi-point flows](https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/). See [Task Management](https://info.mobilerobot.com/documentation/user-guides/task-management/) for all of them.

Manual and Autonomous Modes

The J1600 is a dual-mode vehicle: one machine that works both as a conventional walk-behind electric pallet jack and as a self-driving robot. Understanding the two modes and the handover between them is the core of operating it. For the concept behind the design, 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/).

Manual mode

In manual mode a person controls the tiller and lift functions like a conventional electric pallet jack:

- pallet picks and drops at heights up to 1,600 mm (63 in);
- full payload of 1,600 kg;
- nuanced pickup, difficult approaches, [sensitive or unstable loads](https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/), congestion, and [exceptions](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/);
- gradeability of 5% unloaded and 3% at full load — slopes and dock plates are manual work.

White lights indicate manual mode. See [Manual Operation](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) for the full guide.

Autonomous mode

In automatic mode the J1600 drives itself to a saved destination at up to 5.4 km/h, avoids obstacles, drops the pallet at floor level, and then returns, parks, continues, or waits according to the task:

- autonomous driving is indoor and [level-floor](https://info.mobilerobot.com/documentation/installation/floor-requirements/) only (0% gradeability);
- blue floor-light strips display the protected area, [which expands with speed](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/);

- a 360-degree safety field covers forward and reverse travel.

See [Autonomous Operation](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>) for the full guide.

The key switch

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 the operating state:

Position	Meaning
Power off	Vehicle powered down
Manual	Manual-only operation
Automatic	Autonomous task execution permitted

Handover: entering autonomous mode

[The operator — never the robot — initiates autonomous work](https://info.mobilerobot.com/documentation/user-guides/operator-manual/) (<https://info.mobilerobot.com/documentation/user-guides/operator-manual/>):

1. Create or select a task on the touchscreen and execute it.
2. The robot asks for confirmation to [enter automatic 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/>).
3. Confirm with the physical LED start/resume button.
4. The interface instructs you to step clear; the robot starts only after confirmation.

Takeover: returning to manual control

Manual control is always immediately available:

- grabbing or moving the tiller returns the vehicle to manual control;
- [tiller-position switches](https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/>) handle emergency stop and manual control;

- [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/>) and a belly button (stop and reverse) provide hard stops.

Immediate human takeover is central to the product concept — human judgment is treated as part of the system, not as a failure 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

The ladder describes machine capabilities; it is separate from the Standard and Advanced software packages described in the [J1600 User Manual](https://info.mobilerobot.com/documentation/user-guides/j1600-user-manual/#software-versions) (<https://info.mobilerobot.com/documentation/user-guides/j1600-user-manual/#software-versions>).

User and Operator Guides

Reference guides for operating the J1600 day to day: manual and autonomous operation, tasks, locations, charging, and supported loads.



J1600 User Manual

Reference manual for the J1600 self-driving pallet jack — controls and interface, specifications, operating limits, safety behavior, and software versions.



Operator Manual

The J1600 operator's role — division of work between person and robot, mode handover and takeover, and the situations that call for human judgment.



How-To Guides

Short task-oriented instructions for common J1600 operations — adding a drop location, creating a task, charging, taking over control, and getting help.



Task Management

All J1600 task patterns — Boomerang, Simple ABC, come to me, drop and wait, deliver and park, and multi-point flows — plus task creation and constraints.



Location Management

[Managing J1600 saved locations — creating and naming points, the no-limit location model, recombining destinations, and parking locations.](#)



Manual Operation

[Operating the J1600 manually — tiller control, lift heights and speeds, gradeability, and the handling situations that call for manual mode.](#)



Autonomous Operation

[How the J1600 operates autonomously — confirmation and start, navigation and obstacle avoidance, safety fields and lights, floor-level delivery, and takeover.](#)



Charging

[Charging the J1600 — manual plug-in and automatic opportunity charging, battery specifications, charge and drain rates, runtime, and charger list prices.](#)



Supported Pallets and Loads

[Which pallets and load carriers the J1600 supports — the open-base requirement, size and weight limits, EPAL and GMA compatibility, and fork geometry.](#)

J1600 User Manual

This manual is the day-to-day reference for the J1600 self-driving pallet jack: its [controls](https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/>), capabilities, operating limits, and software. For the operator's role and working practices, see the [Operator Manual](https://info.mobilerobot.com/documentation/user-guides/operator-manual/) (<https://info.mobilerobot.com/documentation/user-guides/operator-manual/>); for step-by-step procedures, see the [How-To Guides](https://info.mobilerobot.com/documentation/user-guides/how-to-guides/) (<https://info.mobilerobot.com/documentation/user-guides/how-to-guides/>).

PRELIMINARY SPECIFICATIONS

The January 2026 specifications are preliminary and subject to change. Use current product documentation for deployment decisions, and see the [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>) for the master list.

The machine at a glance

The J1600 is a compact, electric, [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>) self-driving pallet jack for indoor, floor-to-floor pallet transport. It is operated with a tiller like a conventional walk-behind electric pallet jack or sent autonomously to saved locations. It carries up to 1,600 kg (about 3,500 lb), picks and drops manually at up to 1,600 mm (63 in), delivers autonomously at floor level, and travels at up to 5.4 km/h (1.5 m/s). It 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/>) and made in Denmark. See the [product overview](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>).

Controls and interface

Control	Function
15-inch multi-touch HMI	Task creation, location saving, tutorials, help and support menu
Tiller	Manual driving and lift control; grabbing or moving it returns the vehicle to manual control
Key switch	Three positions: power off, manual only, automatic mode
LED start/resume button	Physical confirmation and resumption of automatic task execution
Emergency-stop buttons	Three, for hard stops
Belly button	Stop and reverse
Floor-indicator lights	White in manual mode; blue strips display the protected area in automatic mode
Audio speaker	Audible signals

Sensing and compute: a 3D navigation LiDAR, an RGB AI camera, an industrial NVIDIA Jetson AI computer, two 2D safety LiDARs (front and rear), a lifting-height sensor, and a [load-detection sensor](https://info.mobilerobot.com/safety-compliance/safety-functions/load-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/load-detection/>). HMI is short for human-machine interface; other terms are in the [glossary](https://info.mobilerobot.com/documentation/concepts/glossary/) (<https://info.mobilerobot.com/documentation/concepts/glossary/>).

Key specifications

Parameter	Value
Rated payload	1,600 kg / approximately 3,500 lb
Maximum manual pick/drop height	1,600 mm / 63 in
Autonomous delivery height	Floor level
Top speed	5.4 km/h / 1.5 m/s / 3.4 mph
Truck weight	980 kg
Vehicle size (forks lowered)	1,893 × 850 × 2,060 mm
Turning radius	1,501 mm
Fork dimensions	1,150 mm long, 180 mm wide, 60 mm thick; outer distance 680 mm, inner 320 mm
Fork height range	90 mm lowest to 1,600 mm highest
Battery	24 V, 200 Ah lithium iron phosphate (LiFePO4)
Drive motor	AC, 1.5 kW
Lift motor	2.2 kW
Wheels	Polyurethane; drive wheel 75 × 230 mm; load wheels 70 × 80 mm
Ground clearance	30 mm
Wheelbase	1,106 mm

[Lifting speeds](https://info.mobilerobot.com/documentation/technical-reference/electrical-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/electrical-specifications/>): 0.10 m/s unloaded and 0.08 m/s at full load; lowering 0.08 m/s unloaded and 0.12 m/s at full load.

Operating limits

Parameter	Limit
Gradeability, automatic mode	0° / 0% — level floors only
Gradeability, manual mode	2.86° / 5% unloaded; 1.72° / 3% at full load
Maximum traversable bump	25 mm / 1 in
Maximum traversable gap	20 mm / 0.8 in
Operating temperature	5–40 °C / 41–104 °F
Relative humidity	20–80%, non-condensing
Floor flatness	TR34 FM3 / FF 25, FL 20
Ingress protection	IP21

Loads must be open-base carriers within a 1,250 × 1,250 mm envelope and 1,700 mm load height — see [Supported Pallets and Loads](https://info.mobilerobot.com/documentation/user-guides/supported-pallets-and-loads/) (<https://info.mobilerobot.com/documentation/user-guides/supported-pallets-and-loads/>).

Safety behavior

The J1600 uses a [layered safety architecture](https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/>): an independent safety controller, two 2D safety LiDARs, three emergency stops, a belly button, tiller-position switches, safety-certified encoders and motor controllers, and a [speed-dependent 360-degree protective field](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/>). The operator must [confirm entry into automatic 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/>), and the robot instructs the operator to step away before starting. Safety functions carry [Performance Levels from PL b to PL d](https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/>). Full details: [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/>).

Software versions

One hardware platform supports [two software versions](https://info.mobilerobot.com/products/software/software-comparison/) (<https://info.mobilerobot.com/products/software/software-comparison/>):

- **Standard software** (<https://info.mobilerobot.com/products/software/standard-software/>) — reduced to essential functions for maximum ease of use; configuration-free [teach-and-repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>); touchscreen task launch and saved locations; [Wi-Fi optional](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>). Intended for single-unit deployments [without systems integration](https://info.mobilerobot.com/documentation/technical-integration/integration-overview/) (<https://info.mobilerobot.com/documentation/technical-integration/integration-overview/>).
- **Advanced software** (<https://info.mobilerobot.com/products/software/advanced-software/>) — adds [VDA 5050](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/) (<https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/>) interoperability, a [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/documentation/technical-integration/fleet-manager-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/>), advanced mission planning, and advanced [integration with other software and equipment](https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/) (<https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/>). €14,500 list as an upgrade; Fleet Manager is €6,500 list per robot. The upgrade is easiest to install at the factory when ordering; a partner can perform it later, but the customer cannot.

Advanced automation functions include [come-to-me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>), automatic charging, VDA 5050 fleet management, and API integrations.

Getting help

The on-machine **Help/Support** menu provides a QR code through which technical requests can be sent directly. Three [after-sales plans](https://info.mobilerobot.com/support/faq/service-and-warranty/) (<https://info.mobilerobot.com/support/faq/service-and-warranty/>) exist — Free, Basic Care, and Full Care — with remote support, warranty, and parts terms varying by plan. Basic Care lists at €4,900 and Full Care at €13,000 per robot per year; Full Care includes a free loan robot when a repair lasts more than two business days.

Daily use guides

- [Manual Operation](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>).
- [Autonomous Operation](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>)
- [Task Management](https://info.mobilerobot.com/documentation/user-guides/task-management/) (<https://info.mobilerobot.com/documentation/user-guides/task-management/>)
- [Location Management](https://info.mobilerobot.com/documentation/user-guides/location-management/) (<https://info.mobilerobot.com/documentation/user-guides/location-management/>).
- [Charging](https://info.mobilerobot.com/documentation/user-guides/charging/) (<https://info.mobilerobot.com/documentation/user-guides/charging/>)
- [Supported Pallets and Loads](https://info.mobilerobot.com/documentation/user-guides/supported-pallets-and-loads/) (<https://info.mobilerobot.com/documentation/user-guides/supported-pallets-and-loads/>)

Operator Manual

The J1600 (<https://info.mobilerobot.com/products/j1600/overview/>) is built around the operator. You initiate every task, perform every pickup, and decide when the machine may drive itself. This manual covers your role and working practices; machine reference data is in the [J1600 User Manual](https://info.mobilerobot.com/documentation/user-guides/j1600-user-manual/) (<https://info.mobilerobot.com/documentation/user-guides/j1600-user-manual/>).

Division of work

You	The J1600
Judge load stability, pallet condition, congestion, urgency, and exceptions	Build and update a 3D map and navigate to saved points
Pick pallets and perform difficult or high handling	Carry up to 1,600 kg along repetitive routes
Select the destination and what happens after delivery	Avoid obstacles and apply speed-dependent safety fields
Confirm entry into autonomous mode	Drop at floor level, then return, park, continue, or wait
Override or resume manual control at any time	Repeat stored tasks consistently

This split reflects the company's human-in-the-loop philosophy: the robot removes repetitive travel, and the person keeps the judgment-heavy work. See [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/>).

Starting autonomous work

1. [Pick up the pallet manually](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>) and check the load.
2. Create or select the task on the touchscreen and execute it.

3. When the robot asks to [enter automatic 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/>), confirm with the physical start/resume button.
4. Step clear when the interface tells you to. The robot starts only after your confirmation.

Taking back control

- Grab or move the tiller to return to manual control immediately.
- [Tiller-position switches](https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/>) provide emergency stop and manual control.
- [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/>) and a belly button (stop and reverse) are available for hard stops.
- The [key switch](https://info.mobilerobot.com/safety-compliance/safety-functions/mode-selection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/mode-selection/>) lets you lock the vehicle to manual-only operation or power it off.

Situations that stay with you

Warehouses are messy, dynamic, and unpredictable. Keep these in manual hands:

1. **Damaged pallets** — spot a broken bottom board or protruding nail before it becomes a hazard or a jam.
2. **Unstable loads** (<https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/>) — recognize a top-heavy, leaning, or poorly stacked load before lifting it.
3. **Plastic-wrap tails** — tuck away loose shrink wrap before it catches a rack or doorframe.
4. **Misplaced pallets** — look around for a pallet that is not exactly where the system expects it.
5. **Damaged goods** — catch leaks or crushed corners before delivery to a customer or production line.
6. **Dock plates and slopes** — [autonomous gradeability is 0%](https://info.mobilerobot.com/documentation/installation/floor-requirements/) (<https://info.mobilerobot.com/documentation/installation/floor-requirements/>); bumps, slopes, and truck entry are manual work.
7. **Crowded floors** (<https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/>) — improvise a safe route through a cluttered receiving area.

8. **Urgency** — reprioritize immediately when a production line is starving.
9. **New routes** — drive to a new point and tap **Save location** instead of waiting for IT.

Mode awareness

- White lights: manual mode.
- Blue floor-light strips: automatic mode; they display the protected area, which expands as speed increases.
- The robot announces mode changes on the interface and asks for confirmation before driving itself.

Everyday tasks

- [Task Management](https://info.mobilerobot.com/documentation/user-guides/task-management/) (<https://info.mobilerobot.com/documentation/user-guides/task-management/>) — all task patterns and post-delivery options.
- [Location Management](https://info.mobilerobot.com/documentation/user-guides/location-management/) (<https://info.mobilerobot.com/documentation/user-guides/location-management/>) — adding and combining saved points.
- [Manual Operation](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>), and [Autonomous Operation](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>).
- [Charging](https://info.mobilerobot.com/documentation/user-guides/charging/) (<https://info.mobilerobot.com/documentation/user-guides/charging/>) — plug-in and automatic charging routines.

New operators typically need about 30 minutes of training — see [Operator Training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>).

How-To Guides

Quick instructions for the most common J1600 operations. Each entry links to the full guide for background and detail.

How to add a drop location and create a task

1. Drive the J1600 manually to the [drop point](https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/) — it handles like a regular electric pallet jack.
2. Tap **Save location** and name the point, for example `pallet1` or "Pallet Bay 1".
3. Tap **Create task** and choose **Drop Pallet at Location**.
4. Choose the post-delivery behavior — return to origin, go to another point or parking, or [stop and wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/).
5. Execute the task, confirm automatic mode with the physical start/go button, and step back.

Full guides: [Location Management](https://info.mobilerobot.com/documentation/user-guides/location-management/), [Task Management](https://info.mobilerobot.com/documentation/user-guides/task-management/).

How to send the robot on a delivery

1. [Pick up a supported pallet manually](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/).
2. Select or create a task on the touchscreen and execute it.
3. Confirm automatic mode with the start/resume button and step clear.

The robot drives itself, avoids obstacles, drops the pallet at floor level, and performs the selected post-delivery action. Full guide: [Autonomous Operation](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/).

How to take back control

- Grab or move the tiller — the vehicle returns to manual control immediately.
- Use the [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/), or the belly button for a hard stop.
- Turn the key switch to manual to keep the vehicle in manual-only operation.

Full guide: [Manual Operation](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (https://info.mobilerobot.com/documentation/user-guides/manual-operation/).

How to charge the robot

- [Manual charging](https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/) (https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/): plug in the charger during a break or whenever the machine is idle — for example before lunch.
- [Automatic charging](https://info.mobilerobot.com/applications/scenarios/automatic-charging/) (https://info.mobilerobot.com/applications/scenarios/automatic-charging/) (optional charger): the robot drives to the station, positions itself, and the charging interface extends to its charging plates, enabling opportunity charging while it is not busy.

Full guide: [Charging](https://info.mobilerobot.com/documentation/user-guides/charging/) (https://info.mobilerobot.com/documentation/user-guides/charging/).

How to check whether a load is supported

Confirm the carrier has an open base with no bottom deck board, fits within 1,250 × 1,250 mm including overhang, stays under 1,700 mm load height, and weighs no more than 1,600 kg. Full guide: [Supported Pallets and Loads](https://info.mobilerobot.com/documentation/user-guides/supported-pallets-and-loads/) (https://info.mobilerobot.com/documentation/user-guides/supported-pallets-and-loads/).

How to get help with a technical issue

Open the on-machine menu, go to **Help/Support**, and scan the QR code to send a technical request directly. Remote support terms depend on your after-sales plan — see the [J1600 User Manual](https://info.mobilerobot.com/documentation/user-guides/j1600-user-manual/#getting-help) (https://info.mobilerobot.com/documentation/user-guides/j1600-user-manual/#getting-help).

Setting up from scratch

New machine? Start with the [J1600 Quick Start Guide](https://info.mobilerobot.com/documentation/getting-started/j1600-quick-start-guide/) (<https://info.mobilerobot.com/documentation/getting-started/j1600-quick-start-guide/>), and the rest of the Getting Started section.

Task Management

A task defines where the J1600 delivers a pallet and what it does afterwards. Tasks are created on the touchscreen without code, and every task is initiated and confirmed by a person.

Named task patterns

- **Boomerang** (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>): deliver to a destination and return to the origin or operator.
- **Simple ABC** (<https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/>): deliver from A to B, then travel to C.
- **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.
- **Come to me** (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>): call the robot to a location using a mobile app or web interface. An advanced automation function.
- **Multi-point to multi-point** (<https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/>): combine saved points freely — useful for cross-docking and changing flows.

The most common task in practice 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.

Creating a task

1. Pick up a supported pallet manually.
2. Open task creation on the touchscreen.
3. Choose the task type and a saved drop destination from the map or list.
4. Choose the post-delivery behavior: return to origin/operator, go to another point or parking, or stop and wait.

5. Execute the task, [confirm automatic mode](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) with the physical start/resume button, and step away when instructed.

Destinations come from saved locations — see [Location Management](https://info.mobilerobot.com/documentation/user-guides/location-management/). Because the robot plans its own routes on its 3D map, you can recombine points without demonstrating every possible A-to-B variation.

Task constraints

- Pallet pickup is always manual.
- Automatic pallet delivery is at floor level. [Handling above floor level, up to 1,600 mm, is manual](https://info.mobilerobot.com/support/troubleshooting/task-and-location-problems/).
- Autonomous mode requires [level floors](https://info.mobilerobot.com/documentation/installation/floor-requirements/) (0% automatic gradeability).
- Loads must meet the open-base envelope in [Supported Pallets and Loads](https://info.mobilerobot.com/documentation/user-guides/supported-pallets-and-loads/).

Task patterns in daily flows

- [Inbound receiving](https://info.mobilerobot.com/applications/use-cases/inbound-receiving/): unload the truck manually, then send each pallet to inspection or storage.
- [Production supply](https://info.mobilerobot.com/applications/use-cases/production-supply/): pick a pallet of materials and deliver it to the line on demand.
- [Cross-docking](https://info.mobilerobot.com/applications/use-cases/cross-docking/): shuffle pallets across multiple origins and destinations with multi-point tasks.
- [Buffer and staging](https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/): move pallets between lines, staging areas, and storage zones while operators stay on value-added work.

Advanced task capabilities

With [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/), task execution can scale up to fleet orchestration through [VDA 5050](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/), a [REST API](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/),

[m/documentation/technical-integration/rest-api-documentation/](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/)), **Fleet Manager** (<https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/>), and advanced mission planning — see the **J1600 User Manual** (<https://info.mobilerobot.com/documentation/user-guides/j1600-user-manual/#software-versions>).

Location Management

Saved locations are the destinations the J1600 can drive to autonomously. They are created by driving, not by configuration, which keeps the location set as flexible as the facility itself.

The location model

- A location is created by [manually driving the robot](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) to the desired point and tapping **Save location** on the touchscreen.
- Each location gets a name chosen by the operator — for example `pallet1` or "Pallet Bay 1".
- There is **no software limit** on the number of saved locations. The practical limit is available warehouse space.
- Any location can be combined with any other in a task. The robot plans routes on its 3D map, so you never teach every A-to-B pair. See [Creating the First Map](https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/).

Adding a location

1. Drive manually to the exact drop point. Autonomous delivery is at floor level, so choose a clear floor position.
2. Tap **Save location**.
3. Name the point recognizably.

This takes minutes and needs no automation expert — adding locations is an operator job by design.

Location types in practice

- **Drop points** (<https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/>): destinations for autonomous floor-level pallet delivery.

- **Parking locations:** points the robot proceeds to after completing a delivery ("[deliver and park](https://info.mobilerobot.com/applications/scenarios/deliver-and-park/)").
- **Temporary storage points** (<https://info.mobilerobot.com/applications/use-cases/temporary-storage/>): short-lived locations created when demand changes (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>) and removed from use when no longer needed.
- **Origin returns:** the pickup point the robot returns to in a [Boomerang task](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>).

Locations in changing facilities

Because locations are cheap to create, the J1600 fits changing layouts, temporary storage, shifting SKU mixes, and [brownfield sites](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>): when the flow changes, drive to the new point and save it. The robot's continuously updated 3D map handles the surrounding changes.

Validated drop points at commissioning

The optional five-day installation and commissioning package includes creation of up to 25 drop points with task and safety validation, and additional validated drop points are available as an add-on. See [First-Time Setup](https://info.mobilerobot.com/documentation/getting-started/first-time-setup/#the-commissioning-package) (<https://info.mobilerobot.com/documentation/getting-started/first-time-setup/#the-commissioning-package>).

Related pages

- [Saving the First Location](https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/) (<https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/>).
- [Task Management](https://info.mobilerobot.com/documentation/user-guides/task-management/) (<https://info.mobilerobot.com/documentation/user-guides/task-management/>).

Manual Operation

In manual mode the J1600 behaves like a conventional walk-behind electric pallet jack. The tiller and manual behavior are deliberately familiar, so an experienced pallet-jack operator can use the machine with about 30 minutes of [training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>).

Manual capabilities

Capability	Value
Pallet pick and drop height	Up to 1,600 mm (63 in)
Payload	Up to 1,600 kg (about 3,500 lb)
Fork lifting speed	0.10 m/s unloaded; 0.08 m/s at full load
Fork lowering speed	0.08 m/s unloaded; 0.12 m/s at full load
Gradeability, unloaded	2.86° / 5%
Gradeability, full load	1.72° / 3%
Traversable bump height	25 mm (1 in)
Traversable gap width	20 mm (0.8 in)

Manual mode is the only mode for handling above floor level: autonomous delivery is always a floor-level drop.

Controls

- **Tiller:** drives and steers the vehicle and controls lifting. Grabbing or moving the tiller during autonomous travel [returns the vehicle to manual control immediately](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/>).
- **Key switch** (<https://info.mobilerobot.com/safety-compliance/safety-functions/mode-selection/>): set to the manual position for manual-only operation.

- **Tiller-position switches** (<https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/>): provide emergency stop and manual-control functions.
- **White lights** indicate the vehicle is in manual mode.

When to work manually

Manual mode carries the judgment-heavy share of pallet work:

- **Pallet pickup** — always manual, including fork placement and load checks.
- **Truck unloading and dock plates** — [automatic gradeability is 0%](https://info.mobilerobot.com/documentation/installation/floor-requirements/) (<https://info.mobilerobot.com/documentation/installation/floor-requirements/>), so slopes, ramps, and trailer entry are manual.
- **Sensitive or unstable loads** (<https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/>) — barrels, top-heavy stacks, leaning loads, and confined maneuvering benefit from manual judgment of pallet detection and height.
- **Congested areas** — improvise a route through [crowded receiving floors](https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/) (<https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/>).
- **Exceptions** (<https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/>) — misplaced pallets, damaged goods, loose shrink wrap, urgent reprioritization.

The [Operator Manual](https://info.mobilerobot.com/documentation/user-guides/operator-manual/) (<https://info.mobilerobot.com/documentation/user-guides/operator-manual/>) lists these situations in full.

Manual driving builds the map

Every manual drive does double duty: the robot continuously [learns and updates its 3D model of the environment](https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/) (<https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/>) while you steer it. Manual driving is also how you create new saved locations — see [Location Management](https://info.mobilerobot.com/documentation/user-guides/location-management/) (<https://info.mobilerobot.com/documentation/user-guides/location-management/>).

Switching to autonomous work

When the repetitive travel portion begins, hand the load over to the robot: create a task, confirm automatic mode, and step away. See [Autonomous Operation](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>) and [Manual and](#)

[Autonomous Modes \(https://info.mobilerobot.com/documentation/getting-started/manual-and-autonomous-modes/\)](https://info.mobilerobot.com/documentation/getting-started/manual-and-autonomous-modes/).

Autonomous Operation

In automatic mode the J1600 drives itself to [saved destinations](https://info.mobilerobot.com/documentation/user-guides/location-management/) (<https://info.mobilerobot.com/documentation/user-guides/location-management/>), avoids obstacles on the way, and delivers pallets at floor level. Autonomous work always starts with a person: [the operator creates the task, confirms the mode change, and can take over at any moment](https://info.mobilerobot.com/documentation/user-guides/operator-manual/) (<https://info.mobilerobot.com/documentation/user-guides/operator-manual/>).

Starting an autonomous run

1. [Pick up the pallet manually](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>) and select or create a task on the touchscreen — see [Task Management](https://info.mobilerobot.com/documentation/user-guides/task-management/) (<https://info.mobilerobot.com/documentation/user-guides/task-management/>).
2. Execute the task. The robot asks to [enter automatic mode](https://info.mobilerobot.com/support/troubleshooting/robot-will-not-enter-autonomous-mode/) (<https://info.mobilerobot.com/support/troubleshooting/robot-will-not-enter-autonomous-mode/>).
3. Confirm with the physical LED start/resume button. The [key switch](https://info.mobilerobot.com/safety-compliance/safety-functions/mode-selection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/mode-selection/>) must be in the automatic position.
4. Step clear when the interface instructs you to. The robot moves only after confirmation.

While the robot drives

- [Top speed](https://info.mobilerobot.com/products/j1600/dimensions-and-performance/) (<https://info.mobilerobot.com/products/j1600/dimensions-and-performance/>) is 5.4 km/h (1.5 m/s / 3.4 mph).
- The robot localizes on the 3D map built during manual driving and plans its own route to the destination — no fixed paths, wires, or reflectors. See [Creating the First Map](https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/) (<https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/>).
- It [detects and avoids obstacles](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>) in dynamic environments, [routing around people and objects](https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/) (<https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/>).
- Preferred travel zones can be defined for safer routing through production areas.

- A 360-degree protective field, monitored by two 2D safety LiDARs and an independent safety controller, covers forward and reverse travel. The [field changes with speed](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) and expands at higher speeds.
- Blue floor-light strips display the protected area and the vehicle's status.

[Person detection](https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) and [braking](https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) carry certified safety [Performance Levels](https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) — see [How J1600 safety works](https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/).

Delivery and after

The robot drops the pallet at floor level, then performs the post-delivery action from the task: [return to origin or operator](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/), proceed to another point or parking, or [stop and wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/). With [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) it can also be called to a location ("[come to me](https://info.mobilerobot.com/applications/scenarios/come-to-me/)") via a mobile app or web interface, and it can drive itself to an automatic charger — see [Charging](https://info.mobilerobot.com/documentation/user-guides/charging/).

Operating limits in automatic mode

- [Level floors](https://info.mobilerobot.com/documentation/installation/floor-requirements/): only: automatic gradeability is 0° / 0%. Slopes and dock plates are manual work.
- [Indoor operation](https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/): within 5–40 °C and 20–80% non-condensing humidity.
- Automatic delivery is floor-level only; higher drops are a manual capability.

Taking over

Manual control is immediately available at all times:

- grab or move the tiller to regain manual control;

- use any of the [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/) or the belly button (stop and reverse);
- the [tiller-position switches](https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/) (https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/), provide emergency stop and manual control.

See [Manual and Autonomous Modes](https://info.mobilerobot.com/documentation/getting-started/manual-and-autonomous-modes/) (https://info.mobilerobot.com/documentation/getting-started/manual-and-autonomous-modes/) for the full mode model and [Manual Operation](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (https://info.mobilerobot.com/documentation/user-guides/manual-operation/), for manual work.

Charging

The J1600 supports two charging methods: manual plug-in charging and, with the optional [automatic charger](https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/) (<https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/>), self-docking opportunity charging.

Battery

Parameter	Value
Battery	24 V, 200 Ah
Chemistry	Lithium iron phosphate (LiFePO4)
Charging rate	Approximately 47 percentage points per hour
Drain, driving fully loaded	Approximately 13% per hour
Drain, driving unloaded	Approximately 12% per hour
Drain, standby	Approximately 2% per hour

Runtime exceeds eight hours in a typical duty cycle. The [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 — these are calculated figures, not guaranteed runtimes, and do not account for standby, lifting, duty cycle, battery reserve, or operating conditions.

The [charging-current relay](https://info.mobilerobot.com/safety-compliance/safety-functions/charging-safety/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/charging-safety/>) is a safety function rated PL b.

Manual charging

Manual charging works like charging a conventional electric pallet jack: plug in the charger during a break or whenever the machine is idle — for example before lunch.

The [manual charger](https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/) (<https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/>) lists at €3,600.

Automatic charging

With the optional automatic charger, the robot drives to the charging 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/) while the robot is not busy, without operator involvement.

- Automatic charging is an advanced automation capability.
- When purchased with the commissioning package, automatic-charging setup is part of installation Day 1 — see [First-Time Setup](https://info.mobilerobot.com/documentation/getting-started/first-time-setup/#the-commissioning-package).
- The automatic charger lists at €8,400.

Which charger to choose

- Single robot, single shift, predictable breaks: manual charging keeps cost lowest and mirrors the routine operators already know.
- Higher utilization or hands-off operation: automatic charging lets the robot top up on its own between tasks.

A charger is not included with the robot purchase, so [plan for one when ordering](https://info.mobilerobot.com/documentation/installation/charger-installation/) — see [Delivery and Unpacking](https://info.mobilerobot.com/documentation/getting-started/delivery-and-unpacking/).

PRELIMINARY SPECIFICATIONS

Battery and charging figures are preliminary January 2026 specifications and are subject to change. See the [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/).

Supported Pallets and Loads

The J1600 handles any forkable carrier with an **open base and no bottom deck board**, within its size and weight envelope. This page defines that envelope and the fork geometry a carrier must accommodate.

Load envelope

Parameter	Limit
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 / about 3,500 lb

The exact envelope is 1,250 mm; some summaries round it to 1.2 m, but 1,250 mm is the figure to plan with.

Supported carrier types

Category	Support
EPAL	EPAL Euro Pallet, EPAL 3, EPAL 6
GMA	All GMA (Grocery Manufacturers Association) pallets with an open base
Custom carriers	Any forkable open-base carrier within the size limits

Examples beyond standard pallets include [open cages, barrels](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/>), and carriers for sensitive loads. The working rule from the product team: everything that is open underneath can be picked up, within the envelope.

Fork geometry

Carriers must accept the J1600's forks:

Parameter	Value
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
Fork height, lowest	90 mm / 3.5 in
Fork height, highest	1,600 mm / 63 in

Judgment still applies

Compatibility 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. [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/>) — top-heavy stacks, leaning pallets, barrels — should be picked and closely maneuvered manually, with autonomous mode reserved for the transport leg. See [Manual Operation](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>) and the [Operator Manual](https://info.mobilerobot.com/documentation/user-guides/operator-manual/) (<https://info.mobilerobot.com/documentation/user-guides/operator-manual/>).

Handling heights

- Manual pick and drop: up to 1,600 mm (63 in).
- Autonomous delivery: floor level only.

ⓘ PRELIMINARY SPECIFICATIONS

These January 2026 figures are preliminary and subject to change. See the [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Installation and Commissioning

How to prepare a site for the J1600 and take it from unboxing to validated daily operation.



Site Readiness Guide

What to check at your facility before a J1600 arrives — floors, climate, pallets, charging location, network, and space — so the robot can go to work on day one.



Operating Environment Requirements

The J1600's environmental limits — temperature, humidity, ingress protection, gradeability, bumps, gaps, and floor class — for autonomous and manual operation.



Floor Requirements

Floor flatness class, gradeability, bump and gap tolerances, ground clearance, and wheel details that determine where the J1600 can drive autonomously.



Network and Wi-Fi Requirements

When the J1600 needs Wi-Fi and when it does not — basic teach-and-repeat operation is network-free, while come-to-me, VDA 5050, APIs, and fleet management use connectivity.



Charger Installation

[Installing the J1600's manual or automatic charger — how each option works, charging and drain rates, list prices, and what to plan before delivery.](#)



Mapping and Drop-Point Setup

[How to map a facility with the J1600 by driving it manually, save drop points with Save location, and build the first autonomous tasks — no code, no infrastructure.](#)



Safety Validation

[What safety validation covers when commissioning a J1600 — the risk assessment, the certified safety functions to confirm on site, and the documentation to rely on.](#)



Deployment Checklist

[A start-to-finish checklist for deploying a J1600 — site checks before delivery, the out-of-box path, the optional five-day commissioning package, and go-live.](#)

Site Readiness Guide

This page summarizes what a facility needs before a [J1600](https://info.mobilerobot.com/products/j1600/overview/) is [delivered](https://info.mobilerobot.com/documentation/getting-started/delivery-and-unpacking/). The J1600 needs no building modifications, tracks, wires, or reflectors, so site preparation is mostly a matter of confirming that the environment is within the robot's operating limits and deciding where drop points and the charger will go.

Confirm the operating environment

The J1600 is designed for indoor, floor-to-floor pallet transport. Check the basics first:

- Ambient temperature between 5°C and 40°C (41°F and 104°F).
- Relative humidity between 20% and 80%, non-condensing.
- The robot's ingress protection is IP21 — it is protected against objects over 12.5 mm and vertically dripping water, not against washdown or outdoor conditions.
- Autonomous routes must run on level floors: automatic-mode gradeability is 0%. Slopes and dock plates remain manual-mode tasks.

Full figures are on [Operating Environment Requirements](https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/).

Check the floors

Autonomous operation expects floor flatness to TR34 FM3 (FF 25 / FL 20). The robot traverses bumps up to 25 mm (1 in) and gaps up to 20 mm (0.8 in). See [Floor Requirements](https://info.mobilerobot.com/documentation/installation/floor-requirements/) for the complete list, including manual-mode gradeability.

Verify space along the routes

Key dimensions for planning aisles, doorways, and turning areas:

Dimension	Value
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)
Turning radius	1,501 mm (59 in)

The complete dimension set is on the [J1600 technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>) page.

Check your pallets and load carriers

The J1600 requires an [open-base carrier with no bottom deck board](https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/) (<https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/>) so its forks can enter. Confirm your carriers fit the envelope:

- Maximum pallet or load length, including overhang: 1,250 mm (49 in).
- Maximum pallet or load width, including overhang: 1,250 mm (49 in).
- Maximum load height from floor: 1,700 mm (67 in).
- Maximum payload: 1,600 kg (about 3,500 lb).

Supported formats include the EPAL Euro Pallet, EPAL 3, EPAL 6, GMA pallets with an open base, and any other forkable open-base carrier within the size limits, such as [open cages and barrels](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/>).

Plan the charging location

Choose where the [manual charger](https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/) (<https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/>) — or the optional automatic charging station — will be installed before delivery. With [automatic charging](https://info.mobilerobot.com/applications/scenarios/automatic-charging/) (<https://info.mobilerobot.com/applications/scenarios/automatic-charging/>), the robot drives itself to the station between tasks. See [Charger Installation](https://info.mobilerobot.com/documentation/installation/charger-installation/) (<https://info.mobilerobot.com/documentation/installation/charger-installation/>).

Decide on connectivity

Basic operation needs no Wi-Fi and [no IT integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>). Wi-Fi and network planning only matter if you want advanced functions such as [come-to-me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>), [VDA 5050](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/) (<https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/>), fleet integration, or the [REST API](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>). See [Network and Wi-Fi Requirements](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>).

Plan drop points and tasks

Walk the intended routes and note where pallets should be dropped. Locations are created after delivery by driving the robot to each point and saving it — there is no software limit on the number of saved locations. See [Mapping and Drop-Point Setup](https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/) (<https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/>).

Consider the commissioning package

For a structured go-live, a five-day [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/>) (€10,000 end-user list price) adds a pre-installation feasibility check for all selected tasks and loads, a [risk assessment](https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/>), and a project plan before the on-site work starts. The [Deployment Checklist](https://info.mobilerobot.com/documentation/installation/deployment-checklist/) (<https://info.mobilerobot.com/documentation/installation/deployment-checklist/>) shows both the basic and the packaged path.

TIP

Operators who already drive electric pallet jacks need about 30 minutes of [training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>). Plan a short session for each operator on delivery day rather than a separate training project.

Operating Environment Requirements

The J1600 is designed for indoor, floor-to-floor pallet transport. This page lists the environmental limits a site must stay within for reliable operation, in both [autonomous and manual mode](https://info.mobilerobot.com/documentation/getting-started/manual-and-autonomous-modes/) (<https://info.mobilerobot.com/documentation/getting-started/manual-and-autonomous-modes/>).

PRELIMINARY SPECIFICATIONS

The January 2026 [specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>) are preliminary and subject to change. Confirm figures against the current product documentation before committing to a deployment.

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

Autonomous mode is a level-floor application

Automatic gradeability is 0%. Ramps, slopes, and dock plates are handled in [manual mode](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>), where the operator can adapt to bumps, misalignment, and truck-bed conditions. This division of work is deliberate — see [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/>).

Indoor use only

IP21 protection and the 5–40°C temperature range make the J1600 an indoor vehicle. It is not rated for rain, washdown areas, or freezer environments.

Floors do not need to be perfect

The robot tolerates bumps up to 25 mm and gaps up to 20 mm, and its 3D navigation is designed for real-world [brownfield conditions](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>). The flatness class and traversal limits on [Floor Requirements](https://info.mobilerobot.com/documentation/installation/floor-requirements/) (<https://info.mobilerobot.com/documentation/installation/floor-requirements/>) still apply on every autonomous route.

Checking your site

Walk each planned autonomous route and confirm it is level, indoors, and within the bump and gap limits, then verify temperature and humidity in every zone the robot will cross — a chilled buffer or an open dock door can put part of a route outside the limits. The [Site Readiness Guide](https://info.mobilerobot.com/documentation/installation/site-readiness-guide/) (<https://info.mobilerobot.com/documentation/installation/site-readiness-guide/>) covers the full pre-delivery check, and the pre-installation feasibility check in the [commissioning package](https://info.mobilerobot.com/documentation/installation/deployment-checklist/) (<https://info.mobilerobot.com/documentation/installation/deployment-checklist/>) validates all selected tasks and loads against these limits.

Floor Requirements

Floors decide where the J1600 can drive autonomously. This page collects every floor-related limit so you can assess a facility route by route.

PRELIMINARY SPECIFICATIONS

The January 2026 [specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>) are preliminary and subject to change.

Flatness and levelness

Autonomous routes require floor flatness and levelness to **TR34 FM3**, equivalent to **FF 25 / FL 20**. This is a standard industrial concrete-floor classification; most existing warehouse and production floors in reasonable condition meet it.

Slopes

Mode	Gradeability
Automatic mode	0° / 0%
Manual mode, no load	2.86° / 5%
Manual mode, full load	1.72° / 3%

Autonomous driving is a level-floor application. Any slope — including dock plates and ramps — is [driven manually](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>), where the operator judges alignment and surface condition. Plan autonomous [drop points](https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/) (<https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/>) on level floor only.

Bumps, gaps, and clearance

Parameter	Metric	Imperial
Maximum traversable bump height	25 mm	1 in
Maximum traversable gap width	20 mm	0.8 in
Ground clearance	30 mm	1.2 in

Expansion joints, thresholds, and drain covers along autonomous routes must stay within the bump and gap limits.

Wheels

The J1600 runs on polyurethane wheels:

- Drive wheel: 75 mm wide × 230 mm diameter (3 × 9 in).
- Load wheels: 70 mm wide × 80 mm diameter (2.8 × 3.1 in).

Polyurethane wheels suit smooth, dry indoor concrete. The IP21 rating and indoor design mean wet or contaminated floors are outside the intended envelope — see [Operating Environment Requirements](https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/) (<https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/>).

Real-world floors are the design target

The J1600 is validated under intentionally imperfect conditions, including uneven flooring and water-filled test loads at the company's [Copenhagen test area](https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/) (<https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/>), and its 3D navigation is built for [brownfield sites](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>) with changing layouts. That robustness does not extend the limits above: a route that exceeds the bump, gap, slope, or flatness figures needs manual driving or a different path.

Before delivery, walk each planned route with the [Site Readiness Guide](https://info.mobilerobot.com/documentation/installation/site-readiness-guide/) (<https://info.mobilerobot.com/documentation/installation/site-readiness-guide/>). If you buy the commissioning package, the pre-installation feasibility check validates the selected routes — see the

[Deployment Checklist](https://info.mobilerobot.com/documentation/installation/deployment-checklist/) (<https://info.mobilerobot.com/documentation/installation/deployment-checklist/>).

Network and Wi-Fi Requirements

The J1600 does not require a network to do its core job. This page explains which functions run without any connectivity, which ones use it, and what to prepare if you want them.

Basic operation: no network required

The [standard out-of-box workflow](https://info.mobilerobot.com/products/j1600/how-it-works/) (<https://info.mobilerobot.com/products/j1600/how-it-works/>) — manual driving, [saving locations](https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/) (<https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/>), creating tasks on the touchscreen, and autonomous delivery — works without Wi-Fi and without any IT integration:

- No mandatory Wi-Fi for basic use.
- No mandatory warehouse-management system (WMS), fleet manager, or other systems integration.
- Mapping and navigation run onboard using [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>); no infrastructure or network dependency.

A single robot doing [teach-and-repeat](https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/) (<https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/>) transport can be deployed in a facility with no usable Wi-Fi at all.

Functions that use connectivity

Connectivity becomes relevant when you scale beyond the basic workflow:

Function	Why it needs a network
Come-to-me	The robot is called to a location from a mobile app or web interface.
VDA 5050	Fleet-level interoperability with a compatible fleet-management layer.
REST API	Integration with other software and equipment.
Fleet Manager	Orchestration of multiple robots.
Remote support	The support portal accepts tickets and device-log uploads.

[Come-to-me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>), automatic charging coordination, [VDA 5050](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/) (<https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/>) fleet management, and API integrations are advanced automation functions; VDA 5050, the [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/documentation/technical-integration/fleet-manager-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/>), and advanced mission planning require the [Advanced software package](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>) — see [Software Updates](https://info.mobilerobot.com/documentation/service-maintenance/software-updates/) (<https://info.mobilerobot.com/documentation/service-maintenance/software-updates/>), and [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>), for how the capability levels stack.

When Wi-Fi gets connected

If you want the robot online, Wi-Fi connection is part of Day 1 of the [commissioning package](https://info.mobilerobot.com/documentation/installation/deployment-checklist/) (<https://info.mobilerobot.com/documentation/installation/deployment-checklist/>) — and it is genuinely optional. You can also start network-free and add connectivity later when an application grows into [fleet or integration needs](https://info.mobilerobot.com/documentation/technical-integration/integration-overview/) (<https://info.mobilerobot.com/documentation/technical-integration/integration-overview/>).

Planning notes

- Decide before delivery whether any advanced function is in scope, so Wi-Fi coverage along the robot's routes can be checked in time.
- Getting help does not depend on the robot being online: the on-machine Help/Support menu shows a QR code through which technical requests can be sent directly. See [Diagnostics and Log Collection](https://info.mobilerobot.com/documentation/service-maintenance/diagnostics-and-log-collection/) (<https://info.mobilerobot.com/documentation/service-maintenance/diagnostics-and-log-collection/>).

- For detailed network specifications, ask your partner or hello@mobilerobot.com when [planning a fleet or integration project](https://info.mobilerobot.com/documentation/technical-integration/system-integrator-technical-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/system-integrator-technical-guide/>).

Charger Installation

The J1600 charges from either a manual charger or 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 how each option works, what to plan for at the site, and the battery figures that drive charger placement decisions.

PRELIMINARY SPECIFICATIONS

The January 2026 [specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>) are preliminary and subject to change.

Choose a charging option

Option	End-user list price (2026)	How it works
Manual charger	€3,600	Plug in the charger during a break or whenever the machine is idle — the same routine as a conventional electric pallet jack.
Automatic charger	€8,400	The robot drives to the station, positions itself at the charger, and a charging interface extends to the vehicle's charging plates.

INFO

A charger is not included in the J1600's €65,000 base price. Plan the charger as a separate line item.

Manual charging

[Manual charging](https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/) (<https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/>) needs no robot configuration: pick a spot with a power outlet near where the

machine idles, and plug in during natural pauses — before lunch, between shifts, or overnight. It fits single-robot deployments where an operator is always nearby.

Automatic charging

[Automatic charging](https://info.mobilerobot.com/applications/scenarios/automatic-charging/) (<https://info.mobilerobot.com/applications/scenarios/automatic-charging/>) is an advanced automation capability that enables **opportunity charging**: the robot tops up on its own whenever it is not busy, without an operator remembering to plug it in.

Placement notes:

- The station needs [level floor](https://info.mobilerobot.com/documentation/installation/floor-requirements/) (<https://info.mobilerobot.com/documentation/installation/floor-requirements/>) and enough approach space for the robot to position itself in front of the charger.
- If you purchase the automatic charger with the [commissioning package](https://info.mobilerobot.com/documentation/installation/deployment-checklist/) (<https://info.mobilerobot.com/documentation/installation/deployment-checklist/>), its setup is part of on-site Day 1.

Battery figures for planning

The J1600 uses a [24 V, 200 Ah lithium iron phosphate \(LiFePO4\) battery](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/>).

Parameter	Value
Charging rate	approximately 47 percentage points per hour
Drain, driving fully loaded	approximately 13% per hour
Drain, driving without load	approximately 12% per hour
Drain, standby	approximately 2% per hour

Runtime exceeds eight hours in a typical duty cycle. The drain rates imply roughly 7.7 hours of continuous fully loaded driving or 8.3 hours unloaded, but these are calculated figures — not guaranteed runtimes — before allowing for standby, lifting, duty cycle, battery reserve, and operating conditions. For a single-shift operation, a manual charge during breaks or an automatic station for opportunity charging comfortably covers the day.

The [charging-current relay](https://info.mobilerobot.com/safety-compliance/safety-functions/charging-safety/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/charging-safety/>) is a certified safety function rated PL b — part of the layered safety architecture described 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/>).

Before delivery

- Decide manual or automatic and order accordingly — automatic-charging setup on Day 1 only happens when the charger is purchased.
- Reserve the floor location and power supply as part of your [site readiness check](https://info.mobilerobot.com/documentation/installation/site-readiness-guide/) (<https://info.mobilerobot.com/documentation/installation/site-readiness-guide/>).

Mapping and Drop-Point Setup

The J1600 maps a facility by being driven through it. There is no survey, no CAD import, and no infrastructure to install — the robot builds and updates a 3D map while an operator drives, then delivers autonomously to the points you save. This page walks through first-time mapping, drop-point creation, and the first task.

How mapping works

The robot uses [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (simultaneous localization and mapping) processed on an industrial NVIDIA Jetson AI computer. While you drive manually, it continuously learns and updates its understanding of the environment, scanning structures at heights reaching up to 70 m above the vehicle. It needs no fixed tracks, wires, reflectors, or building modifications, and the map keeps updating as the facility changes — which is what makes the J1600 practical in [brownfield sites](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) with shifting layouts.

Terms are defined in the [glossary](https://info.mobilerobot.com/documentation/concepts/glossary/).

First-time setup

1. Power on the J1600 and follow the on-screen tutorial.
2. Use the tiller to drive manually through the facility. The robot learns the environment as you go.
3. Drive to each point where the robot should drop pallets autonomously.
4. Tap **Save location**, name the point, and repeat for every destination you need.

There is no software limit on the number of saved locations — practical limits come from available warehouse space.

TIP

Name locations the way your team talks about them ("Pallet Bay 1", "Line 3 infeed"). Operators pick destinations from the map or list, so recognizable names keep [task creation](https://info.mobilerobot.com/documentation/user-guides/task-management/) fast.

Adding and changing drop points later

New locations are added the same way: drive there once, tap **Save location**, done. Operators change the setup themselves — adding a point takes minutes and needs no automation expert or IT ticket. [Saved points](https://info.mobilerobot.com/documentation/user-guides/location-management/) can be recombined freely into tasks; you do not need to demonstrate every possible A-to-B variation.

Creating the first task

1. Manually pick up a [supported pallet or load carrier](https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/).
2. Open task creation on the touchscreen.
3. Choose the task type and the saved drop destination.
4. Choose what happens after delivery: return to origin, go to another point or parking, or [stop and wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/).
5. Execute the task. The robot asks to enter automatic mode; confirm with the physical start/go button.
6. Step away when the interface tells you to. The robot drives, avoids obstacles, drops the pallet at floor level, and follows the selected post-delivery action.

[Pallet pickup is always manual, and autonomous delivery is at floor level](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) — the manual lift capability up to 1,600 mm does not apply in automatic mode. See [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) for the handover model.

Constraints to respect while placing points

- Drop points must be on level floor: automatic-mode gradeability is 0%. See [Floor Requirements](https://info.mobilerobot.com/documentation/installation/floor-requirements/) (<https://info.mobilerobot.com/documentation/installation/floor-requirements/>).
- Routes between points must stay within the [operating environment limits](https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/) (<https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/>).
- Preferred travel zones can be defined for safer routing through production areas.

Drop points in the commissioning package

If you purchase the five-day commissioning package, on-site Day 1 includes creation of up to 25 drop points plus task validation — see the [Deployment Checklist](https://info.mobilerobot.com/documentation/installation/deployment-checklist/) (<https://info.mobilerobot.com/documentation/installation/deployment-checklist/>). Additional validated drop points are available as an add-on.

Deployment Checklist

This checklist takes a J1600 deployment from site check to daily operation. There are two paths: the [basic out-of-box deployment](https://info.mobilerobot.com/documentation/getting-started/first-time-setup/) (<https://info.mobilerobot.com/documentation/getting-started/first-time-setup/>), which typically takes hours to one day [depending on scope](https://info.mobilerobot.com/applications/planning/deployment-scope-examples/) (<https://info.mobilerobot.com/applications/planning/deployment-scope-examples/>), and the structured five-day commissioning package.

Before delivery

- ☐ Environment within limits: indoor, 5–40°C, 20–80% relative humidity non-condensing — see [Operating Environment Requirements](https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/) (<https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/>).
- ☐ Floors checked on every planned autonomous route: level (0% automatic gradeability), TR34 FM3 flatness, bumps ≤ 25 mm, gaps ≤ 20 mm — see [Floor Requirements](https://info.mobilerobot.com/documentation/installation/floor-requirements/) (<https://info.mobilerobot.com/documentation/installation/floor-requirements/>).
- ☐ Aisles, doorways, and turning areas checked against the vehicle dimensions and the 1,501 mm turning radius — see the [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).
- ☐ [Pallets and load carriers](https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/) (<https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/>) confirmed open-base and within the 1,250 × 1,250 mm envelope, load height $\leq 1,700$ mm, payload $\leq 1,600$ kg.
- ☐ Charger ordered (manual €3,600 or automatic €8,400 list) and its location reserved — see [Charger Installation](https://info.mobilerobot.com/documentation/installation/charger-installation/) (<https://info.mobilerobot.com/documentation/installation/charger-installation/>).
- ☐ Connectivity decided: none for basic use, Wi-Fi if advanced functions are in scope — see [Network and Wi-Fi Requirements](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>).
- ☐ Intended drop points and [task patterns](https://info.mobilerobot.com/documentation/user-guides/task-management/) (<https://info.mobilerobot.com/documentation/user-guides/task-management/>) sketched with the operators who will use them.

The [Site Readiness Guide](https://info.mobilerobot.com/documentation/installation/site-readiness-guide/) (<https://info.mobilerobot.com/documentation/installation/site-readiness-guide/>) covers these checks in detail.

Path 1: basic out-of-box deployment

The standard J1600 is [ready to use on delivery](https://info.mobilerobot.com/documentation/getting-started/delivery-and-unpacking/) — no building modifications, tracks, wires, or reflectors, and [no mandatory WMS, fleet-manager, or IT integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/).

- ☐ [Power on and follow the on-screen tutorial](https://info.mobilerobot.com/documentation/getting-started/j1600-quick-start-guide/).
- ☐ Drive the facility manually so the robot maps it; save each drop point — see [Mapping and Drop-Point Setup](https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/).
- ☐ [Create and run the first task](https://info.mobilerobot.com/documentation/getting-started/creating-the-first-task/); confirm automatic mode with the physical start button.
- ☐ [Train the operators](https://info.mobilerobot.com/documentation/getting-started/operator-training/) — about 30 minutes each for anyone who already drives an electric pallet jack, using the tutorial on the device or online.
- ☐ Set the [charging routine](https://info.mobilerobot.com/documentation/user-guides/charging/) (plug-in during breaks, or automatic opportunity charging).

Typical setup time is hours or one day, depending on scope.

Path 2: five-day commissioning package

The [installation and commissioning package](https://info.mobilerobot.com/products/buying-and-deployment/installation-and-commissioning/) (€10,000 end-user list price) is an optional service that reduces go-live risk through structured preparation, validation, training, and handover. It should not be confused with the machine's basic out-of-box usability.

Pre-installation

- ☐ Feasibility check for all selected tasks and loads.
- ☐ [Risk assessment](https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/).
- ☐ Project plan.

On-site Day 1

- ☐ Unboxing.
- ☐ Wi-Fi connection, if desired.
- ☐ Automatic-charging setup, if purchased.
- ☐ Creation of up to 25 drop points.
- ☐ Task validation.
- ☐ Safety validation.

On-site Day 2

- ☐ Group training for all operators.
- ☐ Individual hands-on practice for up to six operators.

On-site Days 3–4

- ☐ Monitor robot performance in real operation.
- ☐ On-site troubleshooting and support.
- ☐ Additional operator training as needed.

On-site Day 5

- ☐ Acceptance test.
- ☐ Handover.

Available add-ons

- Integration with other software or equipment.
- Additional validated drop points.
- [Fleet Management System setup](https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/>).

After go-live

- ☐ Choose an after-sales support plan — Free, Basic Care, or Full Care — at purchase; see the [support section](https://info.mobilerobot.com/category/support/) (<https://info.mobilerobot.com/category/support/>).

- ☐ Know the help path: the on-machine Help/Support menu provides a QR code for sending technical requests directly — see [Diagnostics and Log Collection](https://info.mobilerobot.com/documentation/service-maintenance/diagnostics-and-log-collection/) (<https://info.mobilerobot.com/documentation/service-maintenance/diagnostics-and-log-collection/>).
- ☐ Keep software current through your support plan — see [Software Updates](https://info.mobilerobot.com/documentation/service-maintenance/software-updates/) (<https://info.mobilerobot.com/documentation/service-maintenance/software-updates/>).
- ☐ Add new drop points as flows change: drive there, tap **Save location**, done.

Technical Integration

How to connect the J1600 to fleet managers, warehouse systems, and other equipment through VDA 5050 and the REST API — and when no integration is needed at all.



System Integrator Technical Guide

Technical orientation for system integrators deploying the J1600 — platform architecture, software levels, integration interfaces, site prerequisites, and commissioning services.



Integration Overview

The J1600's integration options at every scale — from standalone out-of-the-box use with no IT project, through VDA 5050, REST API, and Fleet Manager under the Advanced software.



REST API Documentation

What the J1600 REST API is for, which software level includes it, how to get it installed, and where to request the detailed interface reference.



VDA 5050 Documentation

The J1600's VDA 5050 support — what the interoperability interface enables, how it fits multi-vendor fleets, what software level it requires, and how fleet setup is delivered.



Fleet Manager Guide

The J1600 Fleet Manager software — what it does, per-robot licensing at €6,500 list, how it relates to VDA 5050, and how fleet setup is commissioned.



External System Integration

Connecting the J1600 to warehouse systems, site software, and other equipment — when integration adds value, which interface to use, and who performs the work.



Example Workflows

Worked J1600 task patterns — boomerang, simple ABC, come-to-me, drop-and-wait, deliver-and-park, and multi-point flows — plus the standard delivery and charging workflows.



Integration Troubleshooting

Partner checklist for diagnosing J1600 integration issues — software-level prerequisites, connectivity checks, environment limits, and the escalation path to company support.

System Integrator Technical Guide

This guide orients system integrators who plan to deploy the [J1600 self-driving pallet jack](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>), either as a standalone unit or as part of a larger automation system. It summarizes the platform, the two software levels, the available integration interfaces, and the site conditions to verify before a project starts.

The platform at a glance

Area	What the J1600 provides
Navigation	3D LiDAR SLAM (simultaneous localization and mapping) on an industrial NVIDIA Jetson AI computer
Mapping	Continuous environmental learning while an operator drives; no tracks, wires, reflectors, or building modifications
Safety	Independent safety controller, two 2D safety LiDARs, 360-degree speed-dependent protective field, certified components
Operator interface	15-inch multi-touch HMI, LED start/resume button, three-position key switch, tiller
Connectivity	Wi-Fi optional for basic use; no mandatory IT integration
Integration interfaces	VDA 5050 and REST API (Advanced software), Fleet Manager

[The navigation stack and the safety stack are 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/>): the 3D LiDAR and RGB AI camera serve [navigation and obstacle avoidance](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>), while personnel protection uses two dedicated 2D safety LiDARs and certified components. See [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/>).

Decide whether integration is needed at all

The J1600 is designed to work out of the box. A single robot running [teach-and-repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>) tasks needs no warehouse management system (WMS), no fleet manager, and [no network connection](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>). Treat [systems integration as an option for scaling](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>), not a prerequisite — many deployments never need it. The [integration overview](https://info.mobilerobot.com/documentation/technical-integration/integration-overview/) (<https://info.mobilerobot.com/documentation/technical-integration/integration-overview/>), maps the options.

Software levels

One J1600 hardware platform supports [two software versions](https://info.mobilerobot.com/products/software/software-comparison/) (<https://info.mobilerobot.com/products/software/software-comparison/>):

	Standard software	Advanced software
Focus	Essential functions, maximum ease of use	Systems integration and fleet scale-up
Task creation	Configuration-free teach and repeat	Teach and repeat plus advanced mission planning
Interfaces	Touchscreen only	VDA 5050, REST API
Fleet	Single unit	Fleet Manager, multi-robot orchestration
Connectivity	Wi-Fi optional	Required for connected functions

The [Advanced software upgrade](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>) costs €14,500. It is easiest to install at the factory when the robot is ordered; a partner can perform it later, but the customer cannot perform the upgrade themselves. Plan the software level during specification, not after delivery.

Integration interfaces

- [VDA 5050](https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/>) — full support for the interoperability interface that lets robots

from different vendors run under one compatible fleet layer.

- **REST API** (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>) — software interface for integrating the J1600 with other software and equipment.
- **Fleet Manager** (<https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/>) — per-robot software for orchestrated multi-robot deployments, €6,500 per robot.
- **External system integration** (<https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/>) — approaches for connecting the J1600 to WMS, equipment, and site software.

Site prerequisites to verify

Autonomous operation is an indoor, [level-floor application](https://info.mobilerobot.com/documentation/installation/floor-requirements/) (<https://info.mobilerobot.com/documentation/installation/floor-requirements/>). Verify these limits during the feasibility phase:

Parameter	Requirement
Gradeability, automatic mode	0° / 0% — level floors only
Floor flatness/levelness	TR34 FM3 (FF 25 / FL 20)
Maximum traversable bump	25 mm / 1 in
Maximum traversable gap	20 mm / 0.8 in
Operating temperature	5–40 °C / 41–104 °F
Relative humidity	20–80%, non-condensing
Ingress protection	IP21 — indoor use
Load carriers	Open-base, forkable, within 1,250 × 1,250 mm including overhang, load height up to 1,700 mm

Pallet pickup is always manual, and autonomous pallet delivery is at floor level. Ramps, dock plates, and slopes remain manual-mode tasks.

PRELIMINARY SPECIFICATIONS

The January 2026 [specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (https://info.mobilerobot.com/products/j1600/technical-specifications/) are preliminary and subject to change. Confirm current figures against the latest product documentation before finalizing a design.

Commissioning services

A fixed-price [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/) (€10,000 end-user list) covers pre-installation feasibility, [risk assessment](https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/) (https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/) and project planning, setup of up to 25 [drop points](https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/) (https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/), 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. Available add-ons include integration with other software and equipment, additional validated drop points, and Fleet Management System setup.

On-site engineering support costs €2,400 per day plus travel.

Getting help

Route technical questions through your local partner or hello@mobilerobot.com. The support portal accepts tickets and device-log uploads, and the robot's Help/Support menu provides a QR code for sending technical requests directly. Partners can consult [integration troubleshooting](https://info.mobilerobot.com/documentation/technical-integration/integration-troubleshooting/) (https://info.mobilerobot.com/documentation/technical-integration/integration-troubleshooting/).

Integration Overview

This page maps the J1600's integration options, from a single standalone robot to a multi-vendor fleet. Use it to decide which software level and interfaces a deployment needs.

Integration is optional

[The J1600](https://info.mobilerobot.com/products/j1600/overview/) works out of the box. Basic use requires [no Wi-Fi](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/), no warehouse management system (WMS), no fleet manager, and [no IT integration project](https://info.mobilerobot.com/applications/results/lower-integration-complexity/). An operator [maps the facility by driving](https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/), saves locations, and launches tasks from the touchscreen. Integration capabilities exist for scaling up — they are never a precondition for productive use.

The capability ladder

Level	Capabilities	Requirements
Manual functions	Pallet pick and drop up to 1.6 m; full manual tiller control	None
Basic automation	On-screen task start; saved locations; autonomous travel; floor-level drop; return-to-me; go-to-parking	Standard software
Advanced automation	Come-to-me; automatic charging; VDA 5050 fleet management; API integrations	Advanced software and options

[Come-to-me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) calls the robot to a location through a mobile app or web interface, which means the connected functions on the advanced rung need a network.

Standard and Advanced software

One hardware platform supports [two software versions](https://info.mobilerobot.com/products/software/software-comparison/) (<https://info.mobilerobot.com/products/software/software-comparison/>):

- **Standard software** (<https://info.mobilerobot.com/products/software/standard-software/>) is reduced to essential functions for maximum ease of use. It is built around configuration-free [teach and repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>) and is intended for single-unit deployments without systems integration.
- **Advanced software** (<https://info.mobilerobot.com/products/software/advanced-software/>) adds [VDA 5050](https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/>), interoperability, a [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/documentation/technical-integration/fleet-manager-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/>), advanced mission planning, and advanced integration with other software and equipment.

Upgrade path

The Advanced software upgrade is priced as a separate item:

Item	End-user list price
Advanced software upgrade	€14,500
Fleet Manager, per robot	€6,500

The upgrade is easiest to install at the factory when the robot is ordered. A partner may perform it later; the customer cannot perform the upgrade. If fleet operation or system integration is plausible within the robot's life, consider ordering the Advanced software with the robot.

Where to go next

- Planning a full project: [system integrator technical guide](https://info.mobilerobot.com/documentation/technical-integration/system-integrator-technical-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/system-integrator-technical-guide/>)
- Connecting to a WMS or other equipment: [external system integration](https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/) (<https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/>)

- Multi-vendor fleets: [VDA 5050 documentation](https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/) (https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/) and [VDA 5050 explained](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/) (https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/).
- Typical task flows: [example workflows](https://info.mobilerobot.com/documentation/technical-integration/example-workflows/) (https://info.mobilerobot.com/documentation/technical-integration/example-workflows/).

REST API Documentation

The J1600 offers a REST API for [integrating the robot with other software and equipment](https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/) (<https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/>). This page explains what the API is for, what it requires, and how to obtain the detailed interface reference. It is aimed at integrators and technical staff planning a connected deployment.

What the API is for

The REST API is the J1600's software interface for custom integrations: connecting the robot to site software and equipment beyond what the [touchscreen workflow](https://info.mobilerobot.com/documentation/technical-integration/example-workflows/) (<https://info.mobilerobot.com/documentation/technical-integration/example-workflows/>) covers. It is part of the advanced automation capability set, alongside [come-to-me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>), automatic charging, and [VDA 5050](https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/>), fleet management.

The API is never required for basic use. A standalone J1600 runs [teach-and-repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>) tasks with [no network connection](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>) and [no integration project](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>).

Requirements

API access is included in the [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>) package, together with VDA 5050 interoperability, [Fleet Manager](https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/>), advanced mission planning, and advanced system integration. The upgrade has a list price of €14,500.

The upgrade is easiest to install at the factory when the robot is ordered. A partner can install it on an existing robot later; the customer cannot perform the upgrade.

Choosing between the API and VDA 5050

Use [VDA 5050](https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/>) when the goal is fleet coordination under a compatible fleet-management layer, including fleets that mix robot vendors. Use the REST API for direct integration between the J1600 and other software or equipment. The two can coexist under the same Advanced software package.

Getting the interface reference

The detailed endpoint reference is available on request — contact your local partner or hello@mobilerobot.com for the current API documentation when scoping an integration.

Integration support

Integration with other software and equipment is available as an add-on to the [installation and commissioning package](https://info.mobilerobot.com/documentation/technical-integration/system-integrator-technical-guide/#commissioning-services) (<https://info.mobilerobot.com/documentation/technical-integration/system-integrator-technical-guide/#commissioning-services>). On-site engineering support has a list price of €2,400 per day plus travel. If an integration misbehaves after go-live, partners can follow [integration troubleshooting](https://info.mobilerobot.com/documentation/technical-integration/integration-troubleshooting/) (<https://info.mobilerobot.com/documentation/technical-integration/integration-troubleshooting/>).

VDA 5050 Documentation

The J1600 has full VDA 5050 support. This page covers what that means in practice for a deployment: what the interface enables, what it requires, and how a VDA 5050 fleet setup is delivered. For the standard itself, see [VDA 5050 explained](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/) (<https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/>).

What VDA 5050 enables on the J1600

VDA 5050 is the interoperability interface that lets mobile robots from different vendors work together in the same space under a compatible fleet-management layer. With VDA 5050 enabled, the J1600 can:

- operate as part of a fleet coordinated by a VDA 5050 fleet manager;
- coexist with robots from other vendors under the same fleet layer;
- scale from a single teach-and-repeat unit into an orchestrated multi-robot deployment without changing hardware.

The Mobile Robot Company works with established VDA 5050 fleet-management providers.

Requirements

VDA 5050 support is part of the [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>) package (€14,500 end-user list), which also includes the [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/documentation/technical-integration/fleet-manager-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/>), and advanced mission planning. The upgrade is easiest to install at the factory when the robot is ordered; a partner can install it later, but customers cannot install it themselves.

Connected fleet operation requires a network. Basic standalone use of the J1600 does not — [Wi-Fi is optional out of the box](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>).

Planning a VDA 5050 deployment

1. Order the robots with Advanced software, or have a partner upgrade existing units.
2. Confirm interface specifics — including the supported VDA 5050 version and the fleet-management products validated for your project — with The Mobile Robot Company or your partner during scoping.
3. Include Fleet Management System setup in the commissioning scope. It is an add-on to the [installation and commissioning package](https://info.mobilerobot.com/documentation/technical-integration/system-integrator-technical-guide/#commissioning-services) (<https://info.mobilerobot.com/documentation/technical-integration/system-integrator-technical-guide/#commissioning-services>).
4. Validate tasks and safety on site as part of commissioning before handover.

When VDA 5050 is the wrong tool

A single J1600 serving one flow needs no fleet layer: [teach and repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>) on the [Standard software](https://info.mobilerobot.com/products/software/standard-software/) (<https://info.mobilerobot.com/products/software/standard-software/>) covers it. For direct point integrations with site software or equipment rather than fleet coordination, use the [REST API](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>).

Fleet Manager Guide

Fleet Manager is The Mobile Robot Company's software for orchestrated multi-robot J1600 deployments. This page explains when a fleet manager is needed, how Fleet Manager is licensed, and how it is set up.

When you need a fleet manager

A single J1600 does not need one: the operator creates and launches tasks directly on the touchscreen. A fleet layer becomes relevant when an application grows — several robots sharing routes and zones, orchestrated missions across a site, or coordination with robots from other vendors. Fleet operation is part of the J1600's [progressive-scaling design](https://info.mobilerobot.com/documentation/technical-integration/integration-overview/) (<https://info.mobilerobot.com/documentation/technical-integration/integration-overview/>): start with one standalone unit, add fleet software when the application justifies it.

What Fleet Manager provides

- orchestration of multiple J1600 robots in one deployment;
- advanced mission planning beyond single-robot teach-and-repeat tasks;
- a scaling path that keeps the same hardware and the same [operator workflow](https://info.mobilerobot.com/documentation/technical-integration/example-workflows/) (<https://info.mobilerobot.com/documentation/technical-integration/example-workflows/>).

Fleet Manager belongs to the [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>), portfolio, alongside [VDA 5050](https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/>) interoperability and the [REST API](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>).

Licensing

Item	End-user list price
Fleet Manager software, per robot	€6,500
Advanced software upgrade	€14,500

Fleet Manager is licensed per robot. The Advanced software upgrade is easiest to install at the factory when a robot is ordered; a partner can perform it later, and customers cannot perform it themselves.

Fleet Manager or a third-party VDA 5050 fleet layer

The J1600 has full VDA 5050 support, and The Mobile Robot Company works with established VDA 5050 fleet-management providers. Sites that already run — or plan to run — a mixed-vendor fleet under a VDA 5050 layer can integrate the J1600 into it. Discuss which fleet approach fits your site with the company or your partner during scoping.

Setup and commissioning

Fleet Management System setup is available as an add-on to the [installation and commissioning package](https://info.mobilerobot.com/documentation/technical-integration/system-integrator-technical-guide/#commissioning-services) (<https://info.mobilerobot.com/documentation/technical-integration/system-integrator-technical-guide/#commissioning-services>), which also covers [drop-point creation](https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/) (<https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/>), task and safety validation, operator training, and acceptance testing. For issues after go-live, partners can use [integration troubleshooting](https://info.mobilerobot.com/documentation/technical-integration/integration-troubleshooting/) (<https://info.mobilerobot.com/documentation/technical-integration/integration-troubleshooting/>).

External System Integration

This page covers connecting the J1600 to systems outside the robot: warehouse management systems (WMS), fleet layers, site software, and other equipment. It is for teams deciding whether, when, and how to integrate.

Integration is a choice, not a requirement

The J1600's [basic workflow](https://info.mobilerobot.com/products/j1600/how-it-works/) — map by driving, [save locations](https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/), launch tasks from the touchscreen — requires no WMS, no fleet manager, [no Wi-Fi](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/), and no IT project. Optional rather than mandatory systems integration is a [core design principle](https://info.mobilerobot.com/company/about/our-approach-to-automation/): a deployment can stay standalone for its entire life, or scale into a connected system when the application grows.

This matters for cost. Full automation of a pallet flow typically requires WMS-to-fleet-manager integration, precise load data, and tightly controlled processes. Keeping the operator in the loop lets the J1600 skip that layer for most deployments. See [human-in-the-loop automation](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/).

Available integration routes

Route	Use it for	Requires
VDA 5050 (https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/)	Fleet coordination, including multi-vendor fleets under one compatible fleet layer	Advanced software
REST API (https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/)	Direct integration with other software and equipment	Advanced software
Fleet Manager (https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/)	Orchestrated multi-J1600 deployments and advanced mission planning	Per-robot license

The [Advanced software upgrade](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>) (€14,500 end-user list) covers VDA 5050, the REST API, advanced mission planning, and advanced system integration with other software and equipment. It is easiest to install at the factory with the robot order; a partner can retrofit it, and customers cannot install it themselves.

Who performs the integration

Integration with other software and equipment is offered as an add-on to the five-day [installation and commissioning package](https://info.mobilerobot.com/documentation/technical-integration/system-integrator-technical-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/system-integrator-technical-guide/>) (€10,000 end-user list), which also handles feasibility, drop points, task and safety validation, training, and acceptance testing. On-site engineering support lists at €2,400 per day plus travel. Partners and The Mobile Robot Company deliver this work; contact your partner or hello@mobilerobot.com to scope a project.

Typical scaling sequence

1. **Standalone start.** One robot, [Standard software](https://info.mobilerobot.com/products/software/standard-software/) (<https://info.mobilerobot.com/products/software/standard-software/>), [teach-and-repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>) tasks. Value from day one, [no integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>).

2. **Connected functions.** Add Wi-Fi to use [come-to-me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>) (calling the robot from a mobile app or web interface) and automatic charging.
3. **Fleet and systems.** Upgrade to Advanced software for VDA 5050, the REST API, and Fleet Manager when several robots or external systems enter the picture.

For concrete task patterns at each stage, see [example workflows](https://info.mobilerobot.com/documentation/technical-integration/example-workflows/) (<https://info.mobilerobot.com/documentation/technical-integration/example-workflows/>).

Example Workflows

This page collects the J1600's standard task patterns and end-to-end workflows. Use it to match a material flow in your facility to a task type the robot already supports.

The standard delivery workflow

The most common 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](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>):

1. Manually pick up a [supported pallet or load carrier](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 a saved drop destination.
4. Choose what happens after delivery: 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/resume button.
7. Step away when the interface instructs you to.
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 performs the selected post-delivery action.

The route can be a few meters or well over 100 meters — the workflow is the same. Pallet pickup is always manual, and autonomous delivery is always at floor level.

Named task patterns

Pattern	Behavior	Software level
Boomerang	Deliver to a destination, then return to the origin/operator	Basic automation
Simple ABC	Deliver from A to B, then travel on to C	Basic automation
Drop and wait	Deliver, drop, and remain at the destination	Basic automation
Deliver and park	Complete the drop, then proceed to a defined parking location	Basic automation
Multi-point to multi-point	Combine saved points freely for cross-docking and changing flows	Basic automation
Come to me	Call the robot to a location from a mobile app or web interface	Advanced automation

Locations are created by driving to a point and tapping **Save location** — see [teach and repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>). Saved points recombine freely: you do not teach every A-to-B variation, and there is no software limit on the number of [saved locations](https://info.mobilerobot.com/documentation/user-guides/location-management/) (<https://info.mobilerobot.com/documentation/user-guides/location-management/>).

First-time setup workflow

1. Power on the J1600 and follow the on-screen tutorial.
2. [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/>) with the tiller. The robot continuously learns and updates its 3D map.
3. Drive to each desired autonomous [floor-drop point](https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/) (<https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/>).
4. Tap **Save location**, name the point, and repeat for every destination.

A worked example: drive to a bay, save it as "Pallet Bay 1", create a task with **Drop Pallet at Location**, choose [stop-and-wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/>), execute, confirm automatic mode, and step back.

Charging workflows

- **Manual charging** (<https://info.mobilerobot.com/documentation/user-guides/charging/>): plug in the charger during a break or when the machine is idle, as with a conventional electric pallet jack.
- **Automatic charging** (<https://info.mobilerobot.com/applications/scenarios/automatic-charging/>) (**advanced automation**): the robot drives to the station, positions itself, and the charging interface extends to the vehicle's charging plates. This enables opportunity charging whenever the robot is not busy.

Material-flow examples

- **Inbound receiving** (<https://info.mobilerobot.com/applications/use-cases/inbound-receiving/>): unload the truck manually, then send the pallet autonomously to inspection or storage.
- **Production supply** (<https://info.mobilerobot.com/applications/use-cases/production-supply/>): an operator picks or prepares a pallet; the J1600 delivers materials to the line on demand.
- **Cross-docking** (<https://info.mobilerobot.com/applications/use-cases/cross-docking/>): shuffle pallets across multiple origins and destinations by combining saved points — no bespoke task per pair.
- **Temporary storage** (<https://info.mobilerobot.com/applications/use-cases/temporary-storage/>): create short-lived storage points in minutes when demand changes.
- **Buffer and staging management** (<https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/>): transport between lines, staging areas, and storage zones.
- **Receiving-storage-production-shipping** (<https://info.mobilerobot.com/applications/use-cases/production-to-shipping-transport/>): automate the long travel segments that connect standard warehouse zones.

For the environments these flows suit, see the [J1600 overview](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>); for integrating workflows with fleet or site software, see the [integration overview](https://info.mobilerobot.com/documentation/technical-integration/integration-overview/) (<https://info.mobilerobot.com/documentation/technical-integration/integration-overview/>).

Service and Maintenance

Keeping a J1600 in daily service — getting support, collecting diagnostics, sourcing parts, and staying current on software.



Diagnostics and Log Collection

How to raise a technical request from the J1600's Help/Support menu, upload device logs through the support portal, and what remote support your plan includes.



Spare Parts

How J1600 spare parts flow through the partner network, what each end-user support plan pays for parts, and where partners get current parts terms.



Software Updates

How J1600 software stays current — upgrade entitlements under each support plan, and how the Standard-to-Advanced software upgrade is installed and by whom.

Software Updates

One J1600 hardware platform runs [two software versions, Standard and Advanced](https://info.mobilerobot.com/products/software/software-comparison/) (<https://info.mobilerobot.com/products/software/software-comparison/>), and both stay current through software upgrades tied to your support plan. This page separates the two things people mean by "update": ongoing software upgrades, and the one-time upgrade from Standard to Advanced.

Ongoing software upgrades

Upgrade entitlement follows the [after-sales plan](https://info.mobilerobot.com/support/faq/service-and-warranty/) (<https://info.mobilerobot.com/support/faq/service-and-warranty/>) chosen at purchase:

Plan	Software upgrades
Free Plan	Included for the first year
Basic Care (€4,900 per robot/year list)	Included while the plan is active
Full Care (€13,000 per robot/year list)	Included while the plan is active

If an update needs assistance, remote support is available through the support portal — see [Diagnostics and Log Collection](https://info.mobilerobot.com/documentation/service-maintenance/diagnostics-and-log-collection/) (<https://info.mobilerobot.com/documentation/service-maintenance/diagnostics-and-log-collection/>).

Standard and Advanced software

Standard software (<https://info.mobilerobot.com/products/software/standard-software/>) is reduced to essential functions for maximum ease of use: configuration-free [teach-and-repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>), touchscreen task launch, and saved locations, with Wi-Fi optional. It is intended to be usable by an existing pallet-jack operator without training beyond the basics, and it fits a single-unit deployment with [no systems integration](https://info.mobilerobot.com/documentation/technical-integration/integration-overview/) (<https://info.mobilerobot.com/documentation/technical-integration/integration-overview/>).

Advanced software (<https://info.mobilerobot.com/products/software/advanced-software/>) adds:

- [VDA 5050](https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/>) interoperability;
- a [REST API](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>);
- Fleet Manager;
- advanced mission planning;
- advanced [integration with other software and equipment](https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/) (<https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/>).

See [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>) for how these capabilities layer on the same machine.

Upgrading from Standard to Advanced

Fact	Detail
End-user list price (2026)	€14,500
Easiest installation	At the factory, when the robot is ordered
Later installation	A partner may perform the upgrade on an existing robot
Self-service	Not available — the customer cannot perform the upgrade

TIP

If fleet integration, [VDA 5050](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/) (<https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/>), or API work is plausibly in your future, order the Advanced upgrade with the robot. Factory installation is the easiest path, and the capability then simply waits until you need it.

[Fleet Manager software](https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/>) is licensed per robot at €6,500 (end-user list, 2026). Fleet Management System setup is available as an add-on to the [commissioning package](https://info.mobilerobot.com/documentation/installation/deployment-checklist/) (<https://info.mobilerobot.com/documentation/installation/deployment-checklist/>).

Planning notes

- Advanced functions rely on connectivity — check [Network and Wi-Fi Requirements](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>), before an upgrade project.
- The 2026 list prices above are time-sensitive; confirm current pricing with your partner or hello@mobilerobot.com.

Technical Reference

Reference data for the J1600: consolidated data sheets, dimensions, electrical and battery specifications, and interface details.



Product Data Sheets

The consolidated J1600 data sheet — headline specifications, operating environment limits, compliance summary, and pointers to the detailed reference pages.



Dimensions

All J1600 dimensions in metric and imperial units — vehicle envelope, fork geometry, wheelbase, turning radius, ground clearance, wheels, and the supported load envelope.



Electrical Specifications

J1600 electrical reference — drive and lift motors, 24 V LiFePO4 battery system, charging rates, manual and automatic chargers, and the electrical safety functions.



Battery Specifications

The J1600's 24 V, 200 Ah LiFePO4 battery — drain rates by operating state, charging rate, expected runtime, transport testing to UN 38.3, and regulatory coverage.



Interface Specifications

The J1600's operator and machine interfaces — 15-inch multi-touch HMI, key switch, start/resume button, tiller controls, light indicators, charging interface, and software integratio...

Product Data Sheets

This page consolidates the J1600's data-sheet figures in one place and points to the detailed reference pages. Use it when you need the headline numbers fast; use the linked pages when you need every value.

PRELIMINARY SPECIFICATIONS

The January 2026 specifications are preliminary and subject to change. Confirm current figures with The Mobile Robot Company or your partner before making 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 (forks lowered)	1,893 × 850 × 2,060 mm
Turning radius	1,501 mm
Navigation	3D LiDAR SLAM
Compute	Industrial NVIDIA Jetson 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

The 1.6 m lift height is a manual capability; autonomous delivery is at floor level. Top speed is exactly 5.4 km/h.

Operating environment

Parameter	Limit
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
Operating temperature	5–40 °C / 41–104 °F
Relative humidity	20–80%, non-condensing
Floor flatness/levelness	TR34 FM3 / FF 25, FL 20

Load-carrier envelope

The J1600 requires an [open-base carrier with no bottom deck board](https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/) (<https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/>). Maximum load length and width are 1,250 mm / 49 in each, including overhang; maximum load height from the floor is 1,700 mm / 67 in. Supported types include the EPAL Euro Pallet, EPAL 3, EPAL 6, all GMA pallets with an open base, and any forkable open-base carrier within the size limits.

Compliance summary

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/>) and [meets EU and US safety requirements](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/) (<https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/>), including [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/>) and [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/>). The battery is tested to [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/>). See [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/>) for the safety architecture.

Detailed reference pages

- [Dimensions](https://info.mobilerobot.com/documentation/technical-reference/dimensions/) (<https://info.mobilerobot.com/documentation/technical-reference/dimensions/>) — every vehicle, fork, and wheel measurement.
- [Electrical specifications](https://info.mobilerobot.com/documentation/technical-reference/electrical-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/electrical-specifications/>) — motors, power, and charging.
- [Battery specifications](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/>) — chemistry, drain rates, runtime, and transport testing.
- [Interface specifications](https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/>) — operator controls, indicators, and integration interfaces.
- [J1600 technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>) — the product-section specification page.

Dimensions

Complete dimensional data for the [J1600 self-driving pallet jack](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>), in metric and imperial units. Use these figures for layout planning, aisle checks, and load-carrier verification.

 PRELIMINARY SPECIFICATIONS

The January 2026 specifications are preliminary and subject to change.

Vehicle 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
Ground clearance	30 mm	1.2 in
Wheelbase	1,106 mm	44 in
Turning radius	1,501 mm	59 in
Tiller-handle height, upright	1,234 mm	49 in
Truck weight	980 kg	—

Fork geometry

Parameter	Metric	Imperial
Fork height, lowest position	90 mm	3.5 in
Fork height, highest position	1,600 mm	63 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

The 1,600 mm maximum fork height applies to manual pick and drop. Autonomous pallet delivery is at floor level.

Wheels

Wheel	Size
Load wheels	70 mm wide × 80 mm diameter (2.8 × 3.1 in)
Drive wheel	75 mm wide × 230 mm diameter (3 × 9 in)

Wheels are polyurethane.

Supported load envelope

Parameter	Metric	Imperial
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

The exact maximum envelope is 1,250 mm; carriers must have an [open base with no bottom deck board](https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/) (<https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/>). Supported types include EPAL Euro Pallet, EPAL 3, EPAL 6, open-base GMA pallets, and any forkable open-base carrier within these limits.

Related reference

- [Product data sheets](https://info.mobilerobot.com/documentation/technical-reference/product-data-sheets/) (<https://info.mobilerobot.com/documentation/technical-reference/product-data-sheets/>) — the consolidated specification summary.
- [Electrical specifications](https://info.mobilerobot.com/documentation/technical-reference/electrical-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/electrical-specifications/>), and [battery specifications](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/>).
- [J1600 technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>) in the product section.

Electrical Specifications

Electrical reference data for the J1600: motors, battery system, charging, and the electrically relevant safety functions. For battery chemistry, drain rates, and runtime, see [battery specifications](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/>).

 PRELIMINARY SPECIFICATIONS

The January 2026 specifications are preliminary and subject to change.

Motors and drive

Parameter	Value
Drive motor	AC, 1.5 kW
Lift motor	2.2 kW
Drive type	Electric
Top speed	5.4 km/h / 1.5 m/s / 3.4 mph

Lift performance

Parameter	Metric	Imperial
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

Battery system

Parameter	Value
Nominal voltage	24 V
Capacity	200 Ah
Chemistry	Lithium iron phosphate (LiFePO4)
Charging rate	Approximately 47 percentage points per hour

Chargers

Charger	Behavior	End-user list price
Manual charger	Plug in during breaks or idle time, as with a conventional electric pallet jack	€3,600
Automatic charger	The robot drives to the station, positions itself, and a charging interface extends to the vehicle's charging plates; enables opportunity charging	€8,400

[Automatic charging](https://info.mobilerobot.com/applications/scenarios/automatic-charging/) (<https://info.mobilerobot.com/applications/scenarios/automatic-charging/>) is an advanced automation capability. When purchased with commissioning, its setup is part of installation Day 1.

Electrical protection and safety

Item	Value
Ingress protection	IP21 — protected against objects over 12.5 mm and vertically dripping water
Charging-current relay safety function	Performance Level b (PL b)

The [charging-current relay](https://info.mobilerobot.com/safety-compliance/safety-functions/charging-safety/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/charging-safety/>) is one of the certified safety functions in the J1600's layered safety architecture; [person detection](https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/>), [braking](https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/braking/>), and emergency-stop functions carry higher [Performance Levels](https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/>). See [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/>).

Related reference

- [Battery specifications](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/>) — drain rates, runtime, and transport testing.
- [Product data sheets](https://info.mobilerobot.com/documentation/technical-reference/product-data-sheets/) (<https://info.mobilerobot.com/documentation/technical-reference/product-data-sheets/>) — the consolidated specification summary.

Battery Specifications

Reference data for the J1600's battery system: chemistry, consumption, charging, runtime, and compliance. For charger hardware and prices, see [electrical specifications](https://info.mobilerobot.com/documentation/technical-reference/electrical-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/electrical-specifications/>).

PRELIMINARY SPECIFICATIONS

The January 2026 specifications are preliminary and subject to change.

Battery data

Parameter	Value
Nominal voltage	24 V
Capacity	200 Ah
Chemistry	Lithium iron phosphate (LiFePO4)

LiFePO4 chemistry supports [opportunity charging](https://info.mobilerobot.com/application/s/scenarios/automatic-charging/) (<https://info.mobilerobot.com/application/s/scenarios/automatic-charging/>): topping up the battery during breaks or idle periods rather than waiting for a full discharge cycle.

Consumption and charging rates

Operating state	Rate
Driving, fully loaded	Approximately 13% of capacity per hour
Driving, without load	Approximately 12% per hour
Standby	Approximately 2% per hour
Charging	Approximately 47 percentage points per hour

Runtime

Runtime exceeds eight hours in a typical duty cycle. The drain rates above imply approximately 7.7 hours of continuous fully loaded driving, or 8.3 hours unloaded, before allowing for standby time, lifting, duty cycle, battery reserve, and operating conditions.

CALCULATED FIGURES

The 7.7- and 8.3-hour values are derived from the drain rates, not guaranteed runtimes. Real duty cycles mix driving, lifting, and standby, so achieved runtime varies by application.

Charging options

- **Manual charging** (<https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/>): plug in the charger during a break or while the machine is idle.
- **Automatic charging:** with the optional [automatic charger](https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/) (<https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/>), the robot drives to the station, positions itself, and the charging interface extends to the vehicle's charging plates — opportunity charging without operator involvement. This is an advanced automation capability.

Transport testing and regulation

Reference	Coverage
UN Manual of Tests and Criteria, subsection 38.3 (UN 38.3)	Lithium-battery transport testing
Regulation (EU) 2023/1542 — Batteries Regulation	EU battery regulation, part of the J1600's compliance list

Related reference

- [Electrical specifications](https://info.mobilerobot.com/documentation/technical-reference/electrical-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/electrical-specifications/>). — motors, chargers, and electrical safety functions.
- [Product data sheets](https://info.mobilerobot.com/documentation/technical-reference/product-data-sheets/) (<https://info.mobilerobot.com/documentation/technical-reference/product-data-sheets/>) — the consolidated specification summary.
- [Battery UN 38.3 documentation](https://info.mobilerobot.com/safety-compliance/certificates/battery-un-38-3-documentation/) (<https://info.mobilerobot.com/safety-compliance/certificates/battery-un-38-3-documentation/>) — what the transport test regime covers and how to request documentation.

Interface Specifications

Reference for every interface on the J1600: the controls an operator uses, the indicators the machine presents, the charging interface, and the [software interfaces available for integration](https://info.mobilerobot.com/documentation/technical-integration/integration-overview/) (<https://info.mobilerobot.com/documentation/technical-integration/integration-overview/>).

Operator controls

Control	Function
15-inch multi-touch HMI	Task creation, saved locations, tutorials, and the Help/Support menu
LED start/resume button	Physical confirmation and execution of automatic tasks
Three-position key switch	Selects power off, manual-only, or automatic mode
Tiller	Manual driving and lift control, as on a conventional electric pallet jack
Tiller-position switches	One switch for emergency stop, one for manual control — grabbing or moving the tiller enables immediate manual takeover
Emergency-stop buttons	Three, positioned on the vehicle
Belly button	Stop-and-reverse protection at the tiller

The operator must [confirm entry into automatic mode](https://info.mobilerobot.com/documentation/getting-started/manual-and-autonomous-modes/) (<https://info.mobilerobot.com/documentation/getting-started/manual-and-autonomous-modes/>), on the physical start/resume button, and the interface instructs the operator to step away before the robot starts.

Indicators and feedback

Indicator	Meaning
Blue light strips (three)	Display the current protective field/safety zone in automatic mode; the field expands with speed
Floor-indicator lights	Show automatic-mode status on the floor around the vehicle
White light indication	Manual mode
Audio speaker	Audible signals and instructions

Charging interface

The vehicle carries charging plates for the optional [automatic charger](https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/) (<https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/>): the robot positions itself at the station and the charger's interface extends to the plates. [Manual charging](https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/) (<https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/>) uses a plug-in charger. See [electrical specifications](https://info.mobilerobot.com/documentation/technical-reference/electrical-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/electrical-specifications/>).

Support interface

The HMI's Help/Support menu provides a QR code through which technical requests can be sent directly from the machine.

Software and integration interfaces

Interface	Purpose	Availability
VDA 5050 (https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/)	Multi-vendor fleet interoperability	Advanced software
REST API (https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/)	Integration with other software and equipment	Advanced software
Fleet Manager (https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/)	Orchestrated multi-robot deployments	Per-robot license
Wi-Fi	Optional; required only for connected functions such as come-to-me	All units

Related reference

- [Product data sheets](https://info.mobilerobot.com/documentation/technical-reference/product-data-sheets/) (https://info.mobilerobot.com/documentation/technical-reference/product-data-sheets/) — the consolidated specification summary.
- [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/) — the safety architecture behind the controls and fields.

Concepts and Terminology

The ideas and vocabulary behind the J1600 — human-in-the-loop automation, dual mode, teach and repeat, VDA 5050, pallet-automation fundamentals, and a full glossary.



Human-in-the-Loop Automation

What human-in-the-loop automation means, how work is divided between operator and robot on the J1600, and why keeping a person in charge lowers cost, risk, and rigidity.



Dual Mode

The dual-mode concept — one vehicle that works as a manual electric pallet jack and as a self-driving robot, how the handover works, and why the combination exists.



Teach and Repeat

The teach-and-repeat concept — creating robot tasks by driving to a point and saving it, with no code, no infrastructure, and no limit on saved locations.



Mobile Robot Terminology

The vocabulary of mobile robotics explained — AMR versus AGV, SLAM and LiDAR, brownfield, fleet managers, WMS, protective fields, and where the J1600 fits among the categories.



Glossary

Definitions of the terms used across the Knowledge Center — from AGV, AMR, and API to teach and repeat, VDA 5050, WMS, and the 360-degree safety field.



VDA 5050 Explained

What the VDA 5050 interoperability standard is, the multi-vendor fleet problem it solves, and what full VDA 5050 support means for the J1600.



Pallet Automation Fundamentals

The pallet-transport market in numbers, the spectrum from manual pallet jacks to full automation, the three adoption barriers, and where dual-mode automation fits.

Human-in-the-Loop Automation

Human-in-the-loop automation — also called human-robot collaboration or operator-centric automation — is the operating philosophy behind [the J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>). A person retains task authority, performs contextual handling, and can take over instantly; the robot performs repetitive, predictable travel. This page explains the concept, the division of work, and the reasoning behind it.

Division of work

Human operator	J1600
Judges load stability, pallet condition, congestion, urgency, and exceptions	Builds and updates a 3D map and navigates to saved points
Picks pallets and performs difficult or high manual handling	Carries up to 1,600 kg along repetitive routes
Selects the destination and what happens after delivery	Avoids obstacles and applies speed-dependent safety fields
Confirms entry into autonomous mode	Drops at floor level, then returns, parks, continues, or waits
Overrides or resumes manual control at any time	Repeats stored tasks consistently

Why the operator stays in the loop

The final part of pallet work is disproportionately difficult to automate: checking a pallet, placing forks, judging an unstable load, interfacing with a conveyor, choosing an improvised drop point, or reprioritizing when a production line runs dry. Removing the operator from those decisions typically 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/>), infrastructure, expert configuration, and tightly controlled processes.

By keeping the operator, the J1600 avoids treating human judgment as a system failure. The intended balance is roughly 80% of automation's [productivity gain](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>).

[fo.mobilerobot.com/applications/results/productivity-improvements/](https://info.mobilerobot.com/applications/results/productivity-improvements/)) — the repetitive travel — while retaining [manual flexibility](https://info.mobilerobot.com/applications/results/operational-flexibility/) (<https://info.mobilerobot.com/applications/results/operational-flexibility/>), and lowering cost and implementation risk. See [dual mode](https://info.mobilerobot.com/documentation/concepts/dual-mode/) (<https://info.mobilerobot.com/documentation/concepts/dual-mode/>) for how the handover works in the vehicle.

Where human judgment beats automation

Warehouses are messy, dynamic, and unpredictable. The design assumes a person handles situations such as:

1. spotting a damaged pallet — a broken bottom board or protruding nail — before it becomes a hazard or a jam;
2. judging a [top-heavy, leaning, or poorly stacked load](https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/) (<https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/>) before lifting it;
3. seeing and tucking away a loose shrink-wrap tail before it catches a rack or doorframe;
4. finding a pallet that is not exactly at its recorded position instead of stopping on a system error;
5. catching leaks or crushed corners before goods reach a customer or production line;
6. handling steep dock plates and slopes — autonomous-mode gradeability is 0°, so ramps stay manual;
7. improvising a safe route through a [crowded or cluttered receiving area](https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/) (<https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/>);
8. reprioritizing a delivery immediately when a line is starving;
9. [teaching a new route](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>) by driving there and tapping **Save location**, without calling IT;
10. capturing most of the efficiency gain without the cost and rigidity of full automation.

These examples explain the [design logic](https://info.mobilerobot.com/company/about/our-approach-to-automation/) (<https://info.mobilerobot.com/company/about/our-approach-to-automation/>); they are not comparative test results.

Safety role

Human control is not the vehicle's only safety mechanism. The J1600 also uses an independent safety controller, certified components, two 2D safety LiDARs, emergency stops, and a 360-degree speed-dependent protective field. Human

takeover complements the [certified safety architecture](https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) rather than replacing it. See [how J1600 safety works](https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/).

Product category

Human-in-the-loop operation places the J1600 in a tier of its own between manual pallet jacks and classic [automated guided vehicles \(AGVs\)](https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/): more automated than a manual tool, more flexible and immediate than a fully automated system. For the market picture behind this positioning, see [pallet automation fundamentals](https://info.mobilerobot.com/documentation/concepts/pallet-automation-fundamentals/).

Dual Mode

Dual mode means one vehicle combines two operating behaviors: manual control like a conventional electric pallet jack, and operator-initiated autonomous driving. It is [the J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>)'s defining concept. This page explains both modes, the handover between them, and the reasoning behind the combination.

The two modes

- **Manual mode:** a person controls the tiller and lift functions exactly as on 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/>), covers 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/applications/scenarios/handling-exceptions-and-irregular-loads/) (<https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/>).
- **Automatic mode:** after the operator selects a saved destination and [confirms the mode change](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, wait, or continue behavior.

How the handover works

The operator initiates autonomous work from the task interface and the physical start/resume button. The robot asks for confirmation and instructs the person to step clear before moving. Manual control is regained at any time through the tiller and 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/>), govern emergency stop and manual control, and 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. 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/>).

Capability ladder

Level	Capabilities
Manual functions	Pallet pick and drop up to 1.6 m; full manual tiller control
Basic automation	On-screen task start; saved locations; autonomous travel to saved points; floor-level drop; return-to-me; go-to-parking
Advanced automation	Come-to-me; automatic charging; VDA 5050 fleet management; API integrations

The ladder describes what the vehicle can do; the [Standard and Advanced software packages](https://info.mobilerobot.com/products/software/software-comparison/) describe how capabilities are licensed. See the [integration overview](https://info.mobilerobot.com/documentation/technical-integration/integration-overview/).

Why dual mode exists

Full automation becomes expensive and rigid when the judgment-heavy part of a task — checking loads, placing forks, improvising around congestion — has to be engineered away with WMS and fleet integration, precise load data, and controlled processes. Dual mode leaves those decisions to a person and automates the long travel instead. The intended balance is [roughly 80% automation rather than 100%](https://info.mobilerobot.com/applications/results/productivity-improvements/), with greater [flexibility](https://info.mobilerobot.com/applications/results/operational-flexibility/) and a lower entry cost.

Manual control preserves the ability to unload trucks, handle unstable or sensitive loads, work around congestion, and respond to exceptions; autonomy [removes the repeated walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/). The result is a product tier between manual electric pallet jacks and conventional [AGVs](https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/) and fully automated systems — see [pallet automation fundamentals](https://info.mobilerobot.com/documentation/concepts/pallet-automation-fundamentals/) and [human-in-the-loop automation](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/).

Dual mode on the J1600

For the J1600-specific implementation — controls, workflows, and demonstrations — see the product page on [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>) and the [example workflows](https://info.mobilerobot.com/documentation/technical-integration/example-workflows/) (<https://info.mobilerobot.com/documentation/technical-integration/example-workflows/>).

Teach and Repeat

Teach and repeat is the task-creation method at the heart of the J1600's [Standard software](https://info.mobilerobot.com/products/software/standard-software/): an operator demonstrates a destination once by driving to it, saves it, and the robot can then travel there autonomously — no code, no configuration project, no infrastructure. This page explains the concept and its practical consequences.

How teaching works

1. [Drive the vehicle manually through the facility](https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/). While you drive, the robot continuously builds and updates a 3D map using [LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (simultaneous localization and mapping).
2. Drive to a desired [drop point](https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/).
3. **Tap Save location on the touchscreen and name the point** [on the touchscreen and name the point](https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/).
4. Repeat for every destination you need.

There is no software limit on the number of saved locations; practical limits come from available warehouse space. No tracks, wires, reflectors, or building modifications are involved.

How repeating works

The operator [picks up a pallet manually](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/), selects a saved destination and a post-delivery behavior on the touchscreen, [confirms automatic mode](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) on the physical start/resume button, and steps away. The robot drives itself, avoids obstacles, and drops the pallet at floor level. See [example workflows](https://info.mobilerobot.com/documentation/technical-integration/example-workflows/) for the standard task patterns.

Locations recombine freely

Saved points are independent of each other. The robot navigates from wherever it is to any [saved location](https://info.mobilerobot.com/documentation/user-guides/location-management/) (<https://info.mobilerobot.com/documentation/user-guides/location-management/>), so you never demonstrate every possible origin-destination pair. Ten saved points support [cross-docking](https://info.mobilerobot.com/applications/use-cases/cross-docking/) (<https://info.mobilerobot.com/applications/use-cases/cross-docking/>) and changing flows without ten-squared taught routes.

Why it matters

- **No-code operation:** adding a destination is an operator action, not an automation-engineering task. When a layout changes, the person who noticed the change fixes it.
- **Speed:** [a new location takes minutes](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>) — drive there once and save it. [Operator training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>) takes about 30 minutes, and a first-time user can typically create and launch an autonomous task within about 15 minutes.
- **Brownfield fit:** because the map is learned by driving and updated continuously, teach and repeat works in [existing facilities](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>), with [changing layouts](https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/) (<https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/>).
- **Low threshold:** teach and repeat is why basic J1600 use needs [no Wi-Fi](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>), no WMS, and [no systems integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>) — see [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 philosophy behind that choice.

Where the concept sits in the product

Teach and repeat is the core of the **Standard software**, which is deliberately reduced to essential functions. The [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>) builds on the same foundation with [VDA 5050](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/) (<https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/>), a [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/documentation/technical-integration/fleet-manager-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/>), and advanced

mission planning — see the [integration overview](https://info.mobilerobot.com/documentation/technical-integration/integration-overview/) (<https://info.mobilerobot.com/documentation/technical-integration/integration-overview/>).

Mobile Robot Terminology

Mobile robotics comes with a dense vocabulary. This page explains the key terms in context — what they mean, how they differ, and how they apply to the J1600. For short definitions of every term, see the [glossary](https://info.mobilerobot.com/documentation/concepts/glossary/) (<https://info.mobilerobot.com/documentation/concepts/glossary/>).

AGV, AMR, and the tier in between

An **AGV** (automated guided vehicle) is the conventional automation category: vehicles that follow predefined guidance and typically require expert configuration, controlled processes, and integration work. An **AMR** (autonomous mobile robot) is the broader label for robots that navigate by sensing the environment rather than following fixed guidance; it is also used for the J1600 and comparable machines.

The J1600 occupies a tier between manual pallet jacks and classic AGVs: a [dual-mode](https://info.mobilerobot.com/documentation/concepts/dual-mode/) (<https://info.mobilerobot.com/documentation/concepts/dual-mode/>) vehicle that runs as a familiar manual tool and as a self-driving robot. Immediate human takeover is central to the category — see [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/>).

Pallet jacks and lowlifters

A pallet jack (pallet truck) moves palletized loads at or near floor level. **Lowlifter** is the warehouse-truck class the J1600 competed in as an IFOY applicant — trucks that lift loads for transport rather than for high-bay stacking. The J1600 picks and drops manually up to 1,600 mm and delivers autonomously at floor level.

SLAM, LiDAR, and navigation

LiDAR is a laser ranging sensor. **SLAM** (simultaneous localization and mapping) is the technique of building a map while simultaneously tracking the vehicle's position in it. The J1600 uses [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>) on an industrial NVIDIA Jetson AI computer: it learns the

environment continuously while an operator drives, then localizes and plans routes to saved destinations without tracks, wires, or reflectors.

[Navigation sensing and safety sensing are distinct](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/>). The 3D LiDAR and RGB AI camera belong to the navigation stack; personnel protection uses two separate 2D safety LiDARs, [certified components](https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/>), and a safety controller.

Protective fields and Performance Levels

A **protective field** (safety field) is the monitored zone around the vehicle in which detected persons or obstacles trigger a safe reaction. The J1600's field covers 360 degrees and [expands with speed](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/>). A **Performance Level (PL)**, from EN ISO 13849-1, grades a safety function's reliability from PL a to PL e; J1600 safety functions range from [PL b to PL d](https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/>). See [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/>).

Teach and repeat

Teach and repeat means an operator demonstrates destinations by driving to them and saving them, and the robot then repeats the travel autonomously — no code, no configuration project. It is the J1600's standard task-creation method; see [teach and repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>).

Fleet managers, VDA 5050, and WMS

A **fleet manager** orchestrates multiple robots: assigning missions, coordinating traffic, and managing charging. **VDA 5050** is the interoperability interface that lets robots from different vendors run under one compatible fleet layer — see [VDA 5050 explained](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/) (<https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/>). A **WMS** (warehouse management system) manages inventory and warehouse processes; full automation projects typically integrate WMS, fleet manager, and robots, while basic J1600 use requires none of them.

Brownfield and greenfield

A **brownfield** site is an existing facility whose layout and processes were not designed around new automation — the opposite of a purpose-built greenfield site. The J1600 targets [brownfield use](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>): 3D mapping handles changing layouts, and human takeover absorbs the [exceptions](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/) (<https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/>) that would otherwise require engineering.

Dig deeper

- [Glossary](https://info.mobilerobot.com/documentation/concepts/glossary/) (<https://info.mobilerobot.com/documentation/concepts/glossary/>) — compact definitions, A to Z.
- [Pallet automation fundamentals](https://info.mobilerobot.com/documentation/concepts/pallet-automation-fundamentals/) (<https://info.mobilerobot.com/documentation/concepts/pallet-automation-fundamentals/>) — the market context behind the categories.
- [J1600 overview](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>) — the product these terms describe.

Glossary

Compact definitions of the terms used across the Knowledge Center, in alphabetical order. For fuller explanations of the central concepts, follow the links.

A–C

AGV — [Automated guided vehicle](https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/) (<https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/>); the conventional automation category contrasted with the J1600's product tier between manual pallet jacks and full automation.

AMR — Autonomous mobile robot; a broad label applied to the J1600 and comparable mobile automation.

API / REST API — Software interface for integrating the J1600 with other software and equipment; included in the [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>). See [REST API documentation](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>).

Automatic charging — Optional capability where the robot drives to a charging station, positions itself, and charges through extending contact plates; an advanced automation function. See [Automatic Charging](https://info.mobilerobot.com/applications/scenarios/automatic-charging/) (<https://info.mobilerobot.com/applications/scenarios/automatic-charging/>).

Boomerang — Task pattern: [deliver to a destination and return](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>) to the origin/operator. See [example workflows](https://info.mobilerobot.com/documentation/technical-integration/example-workflows/) (<https://info.mobilerobot.com/documentation/technical-integration/example-workflows/>).

Brownfield — An existing facility or process not designed around new automation. The J1600 is designed for [brownfield sites](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>).

CE marked — European conformity marking; the J1600 is CE marked. See [CE Declaration of Conformity](https://info.mobilerobot.com/safety-compliance/certificates/ce-declaration-of-conformity/) (<https://info.mobilerobot.com/safety-compliance/certificates/ce-declaration-of-conformity/>).

Come to me — Advanced automation function that calls the robot to a location through a mobile app or web interface. See [Come-to-Me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) (https://info.mobilerobot.com/applications/scenarios/come-to-me/).

D–I

Dual mode — Manual pallet-jack operation plus operator-initiated autonomous travel in one vehicle. See [dual mode](https://info.mobilerobot.com/documentation/concepts/dual-mode/) (https://info.mobilerobot.com/documentation/concepts/dual-mode/).

EPAL — European Pallet Association pallet formats; the J1600 supports the [EPAL Euro Pallet, EPAL 3, and EPAL 6](https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/) (https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/).

Experience center — A partner-maintained showroom with a dedicated robot, pallets, and chargers for hands-on customer demonstrations.

Fleet Manager — Per-robot software for orchestrated multi-robot J1600 deployments. See the [Fleet Manager guide](https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/) (https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/).

GMA pallet — Grocery Manufacturers Association pallet format; open-base variants are supported within the J1600's size limits.

HMI — Human-machine interface; the J1600 uses a [15-inch multi-touch panel](https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/) (https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/).

Human in the loop — Operating philosophy in which the operator retains judgment, task initiation, pickup, and takeover. See [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/).

IFOY — International Intralogistics and Forklift Truck of the Year award. The J1600 won [Industrial Truck of the Year 2026](https://info.mobilerobot.com/newsroom/awards/ifo-award-2026/) (https://info.mobilerobot.com/newsroom/awards/ifo-award-2026/).

IP21 — The J1600's ingress-protection rating: protected against objects over 12.5 mm and vertically dripping water; indoor use.

J–P

J1600 — [The Mobile Robot Company](https://info.mobilerobot.com/company/about/company-overview/) (https://info.mobilerobot.com/company/about/company-overview/)'s 1,600 kg dual-mode self-driving pallet jack. See the [J1600 overview](https://info.mobilerobot.com/products/j1600/overview/) (https://info.mobilerobot.com/products/j1600/overview/).

LiDAR — Laser ranging sensor. The J1600 uses one 3D LiDAR for mapping and navigation and two 2D safety LiDARs for protective fields.

LiFePO4 — Lithium iron phosphate, the J1600's battery chemistry. See [battery specifications](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) (https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/).

Lowlifter — Warehouse-truck class for trucks that lift loads for transport rather than stacking; the J1600's IFOY applicant category.

Pallet location — A [saved destination created by driving the vehicle to a point](https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/) (https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/) and tapping **Save location**.

Performance Level (PL) — Safety-function reliability grade under [EN ISO 13849-1](https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/) (https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/); J1600 safety functions range from [PL b to PL d](https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) (https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/).

POC — [Proof of concept](https://info.mobilerobot.com/applications/planning/proof-of-concept-planning/) (https://info.mobilerobot.com/applications/planning/proof-of-concept-planning/); an on-site validation before wider purchase or deployment.

S–Z

SLAM — Simultaneous localization and mapping; the J1600 runs [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/), on an industrial NVIDIA Jetson AI computer.

Standard software — The [configuration-light J1600 software](https://info.mobilerobot.com/products/software/standard-software/) (https://info.mobilerobot.com/products/software/standard-software/), built around teach and repeat, intended for single-unit deployments.

Teach and repeat — Task creation by demonstration: the operator drives to a point and saves it; the robot repeats the travel autonomously. See [teach and repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/).

Tiller — The manual pallet-jack handle; on the J1600 it also carries [position switches](https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/>) for emergency stop and manual takeover.

VDA 5050 — Interoperability interface for multi-vendor mobile-robot fleets; fully supported by the J1600 under the Advanced software. See [VDA 5050 explained](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/) (<https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/>).

WMS — Warehouse management system; not required for basic J1600 use, but commonly integrated in full automation projects.

360-degree safety field — The all-around protective coverage produced by the J1600's [layered safety architecture](https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/>); the field is [speed-dependent and expands at higher speeds](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/>).

VDA 5050 Explained

VDA 5050 is the interoperability interface that lets mobile robots from different vendors work together in the same space under one compatible fleet-management layer. This page explains the concept for readers planning or evaluating fleet automation.

The problem it solves

Without a shared interface, every robot vendor speaks its own protocol, and a site running robots from two vendors ends up with two control systems that cannot coordinate — or with a lock-in decision to buy everything from one vendor. VDA 5050 standardizes the communication between vehicles and the fleet layer, so a compatible fleet manager can coordinate mixed-vendor traffic in the same aisles.

What this means in practice

- A site can add J1600 robots to an existing VDA 5050 fleet without replacing its fleet layer.
- Robots from different vendors can share zones and routes under one coordinating system.
- Fleet decisions and robot purchases decouple: the fleet layer is chosen for the site, the vehicles for the task.

VDA 5050 and the J1600

The J1600 has full VDA 5050 support as part of its [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>), and The Mobile Robot Company works with established VDA 5050 fleet-management providers. A J1600 deployment can therefore start as a single standalone [teach-and-repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>) unit and later join a coordinated fleet — the same hardware, upgraded software.

VDA 5050 sits on the advanced rung of the capability ladder, alongside [come-to-me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>), automatic charging, and API

integrations. Basic use of the robot requires none of them.

When you need it — and when you do not

Situation	VDA 5050 needed?
One robot, one or a few flows, touchscreen tasks	No
Several J1600s coordinated as one fleet	Fleet software needed; VDA 5050 or Fleet Manager (https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/)
Mixed-vendor robot fleet under one fleet layer	Yes
Direct integration with site software or equipment	No — use the REST API (https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/).

Deployment details

For requirements, planning steps, and commissioning of a VDA 5050 setup on the J1600, see the [VDA 5050 documentation](https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/) (https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/) in Technical Integration.

Pallet Automation Fundamentals

This page gives the market and technology context for automating pallet transport: how large the manual segment is, what the automation options look like, and why most pallet movement is still done by hand. It is for readers evaluating automation for the first time.

The market in numbers

Pallet transport is a large, lightly automated market:

- more than one million pallet jacks are sold worldwide each year;
- more than 300,000 are sold in Europe annually;
- more than six million people use pallet jacks in their daily work;
- only about 1% of pallet handling is automated.

The unautomated remainder is dominated by smaller operations — typically one to five pallet-jack operators on a single shift — without the budget, time, or resources for a full automation project.

The automation spectrum

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

Manual solutions preserve flexibility but consume [operator walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) and travel time. Full automation

can remove labor from a task but usually needs expert configuration, [systems integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) — typically warehouse management system (WMS) to fleet manager — infrastructure, and stable processes; a full automation project can require investment approaching €1 million. [Dual mode](https://info.mobilerobot.com/documentation/concepts/dual-mode/) keeps manual control and automates the travel portion, targeting most of the labor benefit at a fraction of the cost and complexity.

The three adoption barriers

Three barriers keep pallet automation at about 1%:

1. **Price.** Large projects are hard to justify for single-shift economics; the J1600 [lists at €65,000](https://info.mobilerobot.com/products/j1600/pricing-and-roi/), and a typical configuration lands around or below €80,000.
2. **Flexibility**. Warehouses are messy and changing — damaged pallets, misplaced loads, congestion, reprioritization. Rigid systems handle these poorly; see [human-in-the-loop automation](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/).
3. **Complexity.** Classic projects require experts to configure, integrate, and change. [Teach and repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) puts [route changes](https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/) in the operator's hands instead.

What "automating the walking" means

The repetitive, low-judgment part of pallet work is the travel between points. The judgment-heavy part — checking pallets, placing forks, [handling unstable loads](https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/), adapting to congestion — is the hardest and most expensive to automate. Automating the travel while keeping a person for judgment captures roughly 80% of the [productivity gain](https://info.mobilerobot.com/applications/results/productivity-improvements/) at a fraction of full automation's cost. That division of work is the fundamental design idea behind the J1600 — see the [J1600 overview](https://info.mobilerobot.com/products/j1600/overview/).

Who benefits first

- [small and medium manufacturers](https://info.mobilerobot.com/applications/industries/manufacturing/) (<https://info.mobilerobot.com/applications/industries/manufacturing/>), and [warehouse operators](https://info.mobilerobot.com/applications/industries/warehousing/) (<https://info.mobilerobot.com/applications/industries/warehousing/>), with roughly one to five pallet-jack operators;
- [single-shift facilities](https://info.mobilerobot.com/company/about/markets-we-serve/) (<https://info.mobilerobot.com/company/about/markets-we-serve/>) that cannot justify a large automation project;
- small [third-party logistics](https://info.mobilerobot.com/applications/industries/third-party-logistics/) (<https://info.mobilerobot.com/applications/industries/third-party-logistics/>), providers, [grocery and FMCG distribution](https://info.mobilerobot.com/applications/industries/grocery-and-fmcg/) (<https://info.mobilerobot.com/applications/industries/grocery-and-fmcg/>), and [e-commerce fulfillment](https://info.mobilerobot.com/applications/industries/e-commerce-and-fulfillment/) (<https://info.mobilerobot.com/applications/industries/e-commerce-and-fulfillment/>);
- larger sites with [local work cells](https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/) (<https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/>) too small or changeable for a conventional fleet project;
- [brownfield sites](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>), seeking incremental automation without infrastructure changes.

Related vocabulary

For the terms used here — AGV, AMR, WMS, fleet manager, brownfield — see [mobile robot terminology](https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/) (<https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/>), and the [glossary](https://info.mobilerobot.com/documentation/concepts/glossary/) (<https://info.mobilerobot.com/documentation/concepts/glossary/>).

Support

FAQs, troubleshooting, service plans, training, and how to reach support.



Frequently Asked Questions

10 pages



Troubleshooting

8 pages



Service and Warranty

8 pages



Training

3 pages



Contact Support

4 pages



Frequently Asked Questions

Direct answers to the most common questions about the J1600 self-driving pallet jack, from capabilities and safety to pricing, service, and availability.



Product and Capabilities

What the J1600 self-driving pallet jack is, what it can carry and lift, how fast it drives, how much operator time it saves, and who it is designed for.



Pallets and Loads

Which pallets and load carriers the J1600 supports, the maximum load size and weight, fork dimensions, and how to handle unstable or sensitive loads.



Navigation and Mapping

How the J1600 navigates with 3D LiDAR SLAM, how mapping and saved locations work, what infrastructure it needs, and which floor conditions it requires.



Safety

How the J1600 protects people — safety LiDARs, the 360-degree protective field, emergency stops, performance levels, certifications, and operator takeover.



Charging and Battery

[The J1600 battery, runtime, charging rates, and the difference between manual and automatic charging, including 2026 list prices for both chargers.](#)



Software and Integrations

[The J1600 Standard and Advanced software packages, VDA 5050 support, REST API, Fleet Manager, upgrade paths, and 2026 list prices for software options.](#)



Installation

[What it takes to deploy the J1600 — out-of-the-box setup, facility requirements, operator training, and the optional five-day installation and commissioning package.](#)



Pricing and Purchasing

[J1600 list prices for the robot, chargers, software, trials, installation, and support plans, plus typical configurations, and how to buy.](#)



Service and Warranty

[The Free, Basic Care, and Full Care support plans for the J1600, warranty coverage, how to get technical help, and on-site service options.](#)



Partners and Availability

[Where the J1600 is available, how the partner network sells and services it, what experience centers offer, and how to apply to become a partner.](#)



Product and Capabilities

Answers to the most common questions about what the J1600 is and [what it can do](https://info.mobilerobot.com/products/j1600/features-and-benefits/) (<https://info.mobilerobot.com/products/j1600/features-and-benefits/>). For the full picture, see the [J1600 overview](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>) and the [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

What is the J1600?

The J1600 is a compact, electric, dual-mode self-driving pallet jack for indoor, floor-to-floor pallet transport. You can operate it with a tiller like a conventional walk-behind electric pallet jack, or send it autonomously to saved locations. It is the first product of [The Mobile Robot Company ApS](https://info.mobilerobot.com/company/about/company-overview/) (<https://info.mobilerobot.com/company/about/company-overview/>), a Danish robotics company founded in November 2024 and [headquartered in Hvidovre, Denmark](https://info.mobilerobot.com/company/locations/headquarters/) (<https://info.mobilerobot.com/company/locations/headquarters/>). The J1600 is made in Denmark.

What does "dual mode" mean?

Dual mode combines two operating behaviors in one vehicle:

- **Manual mode** — a person controls the tiller and lift functions exactly like a conventional electric pallet jack, including nuanced pickup, handling up to 1.6 m, difficult approaches, and [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/>).
- **Automatic mode** — after the operator selects a saved destination and confirms the mode change, the vehicle [drives autonomously](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>), drops the pallet at floor level, and follows its configured return, park, or wait behavior.

See [Dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>) for the full explanation.

How much can the J1600 carry?

The rated payload is 1,600 kg (approximately 3,500 lb).

How high can it lift?

In [manual mode](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>), the J1600 picks and drops pallets at heights up to 1,600 mm (63 in). Autonomous pallet delivery is at floor level. The 1.6 m lift is a manual capability — [the robot does not deliver at height in automatic mode](https://info.mobilerobot.com/support/troubleshooting/task-and-location-problems/) (<https://info.mobilerobot.com/support/troubleshooting/task-and-location-problems/>).

How fast does it drive?

[Top speed](https://info.mobilerobot.com/products/j1600/dimensions-and-performance/) (<https://info.mobilerobot.com/products/j1600/dimensions-and-performance/>) is 5.4 km/h (1.5 m/s / 3.4 mph).

How much operator time does it save?

[Up to 80% of the manual work and operator time spent on repetitive transport](https://info.mobilerobot.com/applications/results/productivity-improvements/) (<https://info.mobilerobot.com/applications/results/productivity-improvements/>). The claim applies to the repetitive travel portion of pallet transport, not to every warehouse process. The design intent is roughly 80% automation rather than 100%: the operator keeps judgment-heavy pickup and [exception handling](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/) (<https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/>), and the robot [removes the repeated walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) (<https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/>). See [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/>).

What does the robot do after it delivers a pallet?

You choose the post-delivery behavior when you create the task: return to the origin or operator, go to another saved point or to parking, or [stop and wait at the destination](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/>). The most commonly used task is [manual pickup, autonomous delivery](https://info.mobilerobot.com/application) (<https://info.mobilerobot.com/application>).

[s/scenarios/manual-pickup-and-autonomous-delivery/](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/)), floor-level drop, and [return to origin \(https://info.mobilerobot.com/applications/scenarios/deliver-and-return/\)](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/).

Do I need Wi-Fi or IT integration to use it?

No. [Wi-Fi is optional for basic use \(https://info.mobilerobot.com/documentation/installation/net-work-and-wi-fi-requirements/\)](https://info.mobilerobot.com/documentation/installation/net-work-and-wi-fi-requirements/), and no warehouse-management system, fleet manager, or [other IT integration \(https://info.mobilerobot.com/applications/results/lower-integration-complexity/\)](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) is required. Advanced connectivity — [VDA 5050 \(https://info.mobilerobot.com/products/software/vda-5050/\)](https://info.mobilerobot.com/products/software/vda-5050/), a [REST API \(https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/\)](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/), and fleet management — is available as an optional software upgrade when the application grows. See [Software and integrations \(https://info.mobilerobot.com/support/faq/software-and-integrations/\)](https://info.mobilerobot.com/support/faq/software-and-integrations/).

How long does it take to learn?

About 30 minutes for an operator who already uses an electric pallet jack. The tiller and manual behavior are designed to feel like a conventional electric pallet jack, and tasks are created on the touchscreen without code.

What controls does the operator have?

A [15-inch multi-touch screen \(https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/\)](https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/) for tasks and locations, a physical LED start/resume button for automatic execution, 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/) (power off, manual only, automatic), and the tiller itself. Grabbing or moving the tiller returns the vehicle to manual control immediately.

Who is the J1600 designed for?

The [primary segment \(https://info.mobilerobot.com/company/about/markets-we-serve/\)](https://info.mobilerobot.com/company/about/markets-we-serve/) is small and medium businesses running a single shift with roughly one to five pallet-jack operators — operations that cannot justify a large automation project. It also fits larger sites with [local work cells \(https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/\)](https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/) or flows that are too small or too changeable for a conventional

fleet project, and [brownfield facilities](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>) seeking incremental automation.

What kinds of work does it automate?

Indoor, floor-to-floor pallet flows: [goods receiving](https://info.mobilerobot.com/applications/industries/goods-receiving/) (<https://info.mobilerobot.com/applications/industries/goods-receiving/>), storage, production supply, [staging and buffer management](https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/) (<https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/>), [cross-docking](https://info.mobilerobot.com/applications/use-cases/cross-docking/) (<https://info.mobilerobot.com/applications/use-cases/cross-docking/>), [temporary storage](https://info.mobilerobot.com/applications/use-cases/temporary-storage/) (<https://info.mobilerobot.com/applications/use-cases/temporary-storage/>), and [shipping](https://info.mobilerobot.com/applications/industries/shipping-and-dispatch/) (<https://info.mobilerobot.com/applications/industries/shipping-and-dispatch/>). Pallet pickup is always manual; the robot automates the travel and the floor-level drop. See [Pallets and loads](https://info.mobilerobot.com/support/faq/pallets-and-loads/) (<https://info.mobilerobot.com/support/faq/pallets-and-loads/>) for what it can carry.

Has the J1600 won any awards?

Yes. The J1600 won the [IFOY AWARD 2026](https://info.mobilerobot.com/newsroom/awards/ifo-award-2026/) (<https://info.mobilerobot.com/newsroom/awards/ifo-award-2026/>) in the Industrial Truck of the Year category, announced on 26 June 2026 after the ceremony in Stuttgart. It competed against products from established industrial-truck manufacturers, passed the three-stage IFOY Audit, and received the [Best in Intralogistics Certificate](https://info.mobilerobot.com/newsroom/awards/best-in-intral-logistics/) (<https://info.mobilerobot.com/newsroom/awards/best-in-intral-logistics/>) on 16 April 2026. The Mobile Robot Company was also named to a [list of 100 robotics startups to watch](https://info.mobilerobot.com/newsroom/awards/startup-recognition/) (<https://info.mobilerobot.com/newsroom/awards/startup-recognition/>) in November 2025 and joined the [NVIDIA Inception](https://info.mobilerobot.com/company/collaborations/nvidia-inception/) (<https://info.mobilerobot.com/company/collaborations/nvidia-inception/>) program the same month.

Where can I see the full specifications?

The [J1600 technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>) page lists dimensions, performance, battery, environment limits, and safety data.

PRELIMINARY SPECIFICATIONS

The January 2026 J1600 specifications are preliminary and subject to change.

Pallets and Loads

Common questions about what the J1600 can pick up and transport. The short version: any forkable, open-base carrier within the size and weight limits below.

Which pallets does the J1600 support?

The J1600 requires an **open-base carrier with no bottom deck board** so its forks can enter. Supported carriers include:

- EPAL Euro Pallet, EPAL 3, and EPAL 6;
- all GMA (Grocery Manufacturers Association) pallets with an open base;
- any other forkable open-base carrier within the size limits.

What are the maximum load dimensions and weight?

Parameter	Limit
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

The exact maximum envelope is 1,250 mm; some shorter overviews round it to 1.2 m. Use the exact figure when checking a load.

Can it move open cages, barrels, and non-standard carriers?

Yes. [Open cages, barrels, and carriers beyond Euro pallets](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/>), are supported as long as the base is open and forkable and the carrier fits the size limits. Compatibility depends on

base geometry, size, stability, and operator judgment — there is 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/>) for every carrier or for hazardous materials.

What are the fork dimensions?

Parameter	Metric	Imperial
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
Fork height, lowest position	90 mm	3.5 in
Fork height, highest position	1,600 mm	63 in

How fast does it lift and lower?

Movement	Speed
Lifting, no load	0.10 m/s (0.33 ft/s)
Lifting, full load	0.08 m/s (0.26 ft/s)
Lowering, no load	0.08 m/s (0.26 ft/s)
Lowering, full load	0.12 m/s (0.39 ft/s)

Can it handle unstable or sensitive loads?

Yes — that is a core reason for dual mode. The operator uses manual control and judgment for pickup and close maneuvering of [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 are a typical

example), then hands the long, repetitive transport over to autonomous mode. Pallet detection and height limits stay under the operator's control during manual handling. See [Dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (https://info.mobilerobot.com/products/j1600/dual-mode/).

Does the robot pick up pallets by itself?

No. Pallet pickup is always manual. The operator picks the pallet, creates or selects a task on the touchscreen, and confirms autonomous mode. The robot then drives, avoids obstacles, and drops the pallet at floor level.

Can it deliver a pallet onto a rack or at height?

No. Autonomous pallet delivery is at floor level. Placing a pallet at height — up to 1,600 mm — is a [manual-mode capability](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (https://info.mobilerobot.com/documentation/user-guides/manual-operation/). See [Product and capabilities](https://info.mobilerobot.com/support/faq/product-and-capabilities/) (https://info.mobilerobot.com/support/faq/product-and-capabilities/).

Does the robot know whether it is carrying a load?

Yes. A load-detection sensor is part of the [safety architecture](https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) (https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/), and its [load-detection safety function](https://info.mobilerobot.com/safety-compliance/safety-functions/load-detection/) (https://info.mobilerobot.com/safety-compliance/safety-functions/load-detection/) is assigned Performance Level b. See [Safety](https://info.mobilerobot.com/support/faq/safety/) (https://info.mobilerobot.com/support/faq/safety/).

Navigation and Mapping

Common questions about how the J1600 finds its way, how you teach it locations, and where it can drive.

How does the J1600 navigate?

With **3D LiDAR SLAM** (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>) (simultaneous localization and mapping) processed by an industrial NVIDIA Jetson AI computer. The robot builds and continuously updates a three-dimensional map of the facility while an operator drives it, then localizes itself in that map and plans routes to saved destinations. It scans environmental structures at heights reaching up to 70 m above the vehicle, and its 3D mapping is designed for greater precision and reliability than traditional 2D navigation in complex or changing environments.

Do I need to install tracks, wires, reflectors, or markers?

No. The J1600 needs no fixed tracks, wires, reflectors, or building modifications. It maps the facility as it is.

How do I create the map?

[Drive the robot 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/>) with the tiller. It learns and updates its understanding of the environment continuously while you drive — there is no separate mapping procedure to run.

How do I add a destination?

Drive manually to the desired [floor-drop point](https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/) (<https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/>), tap **Save location** on the touchscreen, and

name it. Repeat for every destination you need. Operators add locations themselves; no automation expert or IT involvement is needed.

How many locations can I save?

There is no software limit on the number of [saved locations](https://info.mobilerobot.com/documentation/user-guides/location-management/) (<https://info.mobilerobot.com/documentation/user-guides/location-management/>). Practical limits come from the available warehouse space.

Do I have to teach every route?

No. Locations can be recombined freely. The robot navigates from wherever it is to any saved point — you do not demonstrate every possible origin-to-destination combination. This makes [multi-point flows](https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/) (<https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/>), such as [cross-docking](https://info.mobilerobot.com/applications/use-cases/cross-docking/) (<https://info.mobilerobot.com/applications/use-cases/cross-docking/>) practical. See [Pallets and loads](https://info.mobilerobot.com/support/faq/pallets-and-loads/) (<https://info.mobilerobot.com/support/faq/pallets-and-loads/>) for what it carries on those routes.

How does it handle obstacles and people?

The J1600 detects and avoids obstacles in dynamic environments and [routes around people and objects](https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/) (<https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/>) using its continuously updated 3D map. Personnel protection is handled by a [separate, certified 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/>) — two 2D safety LiDAR scanners and an independent safety controller — distinct from the navigation sensors. See [Safety](https://info.mobilerobot.com/support/faq/safety/) (<https://info.mobilerobot.com/support/faq/safety/>), and [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/>).

Can I control where it prefers to drive?

Yes. Preferred travel zones can be defined for safer routing through production areas.

Does it work in brownfield sites and changing layouts?

Yes. The J1600 is designed for [brownfield facilities](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) and changing layouts: 3D mapping handles dynamic environments, the robot drives around obstacles in its way, and operators [re-teach or add locations](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) in minutes when the [layout changes](https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/).

What floor and environment conditions does it need?

Parameter	Requirement
Gradeability, automatic mode	0° / 0% — level floors only
Gradeability, manual mode	2.86° / 5% without load; 1.72° / 3% at full load
Maximum traversable bump	25 mm / 1 in
Maximum traversable gap	20 mm / 0.8 in
Floor flatness/levelness	TR34 FM3 (FF 25 / FL 20)
Operating temperature	5–40 °C / 41–104 °F
Relative humidity	20–80%, non-condensing
Ingress protection	IP21 — indoor use

Autonomous driving is an [indoor, level-floor application](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/). Steep dock plates and slopes remain manual tasks.

What are the navigation sensors, exactly?

A 3D LiDAR and an RGB AI camera feed the navigation and control stack, which runs on the NVIDIA Jetson industrial PC. No values are published for exact sensor geometry, range, accuracy, minimum aisle width, localization tolerance, or obstacle

classes. See the [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>) for the full hardware list.

Safety

Common questions about how the J1600 keeps people safe while driving autonomously. For the complete architecture, see [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/>).

Is the J1600 safe to operate around people?

The J1600 uses a layered safety design: [navigation and obstacle avoidance](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>), certified safety sensing, an independent safety controller, certified actuation, [human confirmation before autonomous work](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/>), and physical override. A full 360-degree protective field supports both forward and reverse autonomous travel. The built-in safety functions improve predictability and may [reduce workplace accidents](https://info.mobilerobot.com/applications/results/safety-improvements/) (<https://info.mobilerobot.com/applications/results/safety-improvements/>), compared with manual pallet handling.

What safety components does it have?

- an independent safety controller;
- two 2D safety LiDAR scanners covering front and rear;
- three emergency-stop buttons;
- a belly button for stop and reverse;
- a [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 switches](https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/>), for emergency stop and for manual control;
- [safety-certified driving-speed and driving-direction encoders](https://info.mobilerobot.com/safety-compliance/safety-functions/speed-monitoring/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/speed-monitoring/>);
- two safety-certified motor controllers.

The 2D safety LiDARs are [separate from the 3D navigation LiDAR](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/>): navigation maps and avoids objects, while the certified 2D safety stack provides personnel

protection. See [Navigation and mapping](https://info.mobilerobot.com/support/faq/navigation-and-mapping/) (https://info.mobilerobot.com/support/faq/navigation-and-mapping/).

How does the protective field work?

The protective field surrounds the vehicle in 360 degrees and [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/) — it expands as travel speed increases. Blue floor-light strips display the current protected area while the robot works autonomously; white light indicates manual mode. [Person detection](https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) (https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) in the safety field triggers the assigned safety functions, including [braking](https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) (https://info.mobilerobot.com/safety-compliance/safety-functions/braking/).

What happens before the robot starts driving by itself?

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/) with the physical start/resume button, and the robot instructs the operator to step away before it moves. Autonomous work never starts without a deliberate human confirmation.

How do I take over or stop the robot?

Grab or move the tiller — the vehicle returns to manual control immediately. You can also use any of the [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/), the belly button (stop and reverse), or the [key switch](https://info.mobilerobot.com/safety-compliance/safety-functions/mode-selection/) (https://info.mobilerobot.com/safety-compliance/safety-functions/mode-selection/), which selects power off, manual only, or automatic mode.

What Performance Levels do the safety functions have?

The preliminary datasheet assigns these [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 are levels of individual functions, not a statement that every subsystem shares the same PL.

Which standards and directives does the J1600 comply with?

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](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/) (<https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/>) includes:

- [Directive 2006/42/EC \(Machinery\)](https://info.mobilerobot.com/safety-compliance/standards/eu-machinery-requirements/) (<https://info.mobilerobot.com/safety-compliance/standards/eu-machinery-requirements/>), [2014/30/EU \(EMC\)](https://info.mobilerobot.com/safety-compliance/standards/emc-red-rohs-and-battery-regulations/), [2014/53/EU \(Radio Equipment\)](https://info.mobilerobot.com/safety-compliance/standards/emc-red-rohs-and-battery-regulations/), [2011/65/EU \(RoHS\)](https://info.mobilerobot.com/safety-compliance/standards/emc-red-rohs-and-battery-regulations/), and [Regulation \(EU\) 2023/1542 \(Batteries\)](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/>);
- [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](https://info.mobilerobot.com/safety-compliance/standards/iso-12100/), [EN ISO 12100:2010](https://info.mobilerobot.com/safety-compliance/standards/iso-12100/) (<https://info.mobilerobot.com/safety-compliance/standards/iso-12100/>), and [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/>), and [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/>);

- [UN 38.3 battery transport testing](https://info.mobilerobot.com/safety-compliance/certificates/battery-un-38-3-documentation/) (<https://info.mobilerobot.com/safety-compliance/certificates/battery-un-38-3-documentation/>).

This is summarized as compliance with EU and US safety requirements, especially ISO 3691-4 and ANSI/ITSDF B56.5. No [certificates](https://info.mobilerobot.com/safety-compliance/certificates/) (<https://info.mobilerobot.com/safety-compliance/certificates/>), test reports, declaration numbers, notified-body information, or country-specific approvals are published; use current product documentation for deployment decisions.

Can it reverse safely in autonomous mode?

Yes. The 360-degree protective field supports certified safe reversing without specially marked target zones.

Is human supervision the only safety mechanism?

No. Human takeover complements the [certified safety architecture](https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/>) — the independent controller, safety LiDARs, emergency stops, and speed-dependent protective field operate regardless of the operator. See [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 how the human role and the safety system fit together.

Charging and Battery

Common questions about powering the J1600 through a working day.

What battery does the J1600 use?

A [24 V, 200 Ah lithium iron phosphate \(LiFePO4\) battery](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/>). The [drive motor](https://info.mobilerobot.com/documentation/technical-reference/electrical-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/electrical-specifications/>) is a 1.5 kW AC motor and the lift motor is rated 2.2 kW. The battery is tested per [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/>) (UN Manual of Tests and Criteria, subsection 38.3) for transport.

How long does it run on a charge?

Runtime exceeds eight hours in a typical duty cycle. The measured drain rates are:

Condition	Battery drain
Driving fully loaded	approximately 13% per hour
Driving without load	approximately 12% per hour
Standby	approximately 2% per hour

These rates imply roughly 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. Treat those calculated figures as indicative, not guaranteed runtimes.

How fast does it charge?

Approximately 47 percentage points of charge per hour.

What charging options are there?

Two:

- **Manual charging** (<https://info.mobilerobot.com/documentation/user-guides/charging/>) — plug in the charger during a break or when the machine is idle, exactly as you would with a conventional electric pallet jack.
- **Automatic charging** (<https://info.mobilerobot.com/applications/scenarios/automatic-charging/>) — with the optional automatic charger, the robot drives to the station, positions itself at the charger, and a charging interface extends to the vehicle's charging plates. This enables opportunity charging whenever the robot is not busy.

Automatic charging is an advanced automation capability. When purchased, its setup is part of Day 1 of the [installation and commissioning package](https://info.mobilerobot.com/support/faq/installation/) (<https://info.mobilerobot.com/support/faq/installation/>).

What do the chargers cost?

2026 end-user list prices:

Item	List price
Manual charger	€3,600
Automatic charger	€8,400

Is a charger included with the robot?

A charger is not included with the J1600 (from €65,000) — [choose a manual or automatic charger](https://info.mobilerobot.com/documentation/installation/charger-installation/) (<https://info.mobilerobot.com/documentation/installation/charger-installation/>) when configuring your order. See [Pricing and purchasing](https://info.mobilerobot.com/support/faq/pricing-and-purchasing/) (<https://info.mobilerobot.com/support/faq/pricing-and-purchasing/>) for typical configurations.

Can the robot work a full single shift?

That is the design target: the economics and runtime are aimed at single-shift operations of eight hours per day, five days per week. With opportunity charging via

the [automatic charger](https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/) (<https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/>), the robot tops up whenever it is idle. See [Product and capabilities](https://info.mobilerobot.com/support/faq/product-and-capabilities/) (<https://info.mobilerobot.com/support/faq/product-and-capabilities/>) for the target operation profile.

Software and Integrations

Common questions about the J1600's software, connectivity, and [integration options](https://info.mobilerobot.com/documentation/technical-integration/integration-overview/) (<https://info.mobilerobot.com/documentation/technical-integration/integration-overview/>).

What software does the J1600 come with?

One hardware platform supports [two software versions](https://info.mobilerobot.com/products/software/software-comparison/) (<https://info.mobilerobot.com/products/software/software-comparison/>):

- **Standard software** (<https://info.mobilerobot.com/products/software/standard-software/>) — reduced to essential functions for maximum ease of use. It is built around configuration-free [Teach and Repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>), designed to be "consumer-level easy" for an existing pallet-jack operator, and is ideal for a single-unit deployment [without systems integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>). Tasks are launched from the touchscreen using saved locations, and [Wi-Fi is optional](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>).
- **Advanced software** (<https://info.mobilerobot.com/products/software/advanced-software/>) — adds VDA 5050 interoperability, a REST API, Fleet Manager, advanced mission planning, and advanced integration with other software and equipment. It is priced as a separate upgrade.

What is Teach and Repeat?

The operator demonstrates the work instead of programming it: drive to a point, [tap Save location](https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/) (<https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/>), and the robot can then travel there autonomously on demand. No code, no configuration project. See [Navigation and mapping](https://info.mobilerobot.com/support/faq/navigation-and-mapping/) (<https://info.mobilerobot.com/support/faq/navigation-and-mapping/>) for how locations and mapping work, and the [glossary](https://info.mobilerobot.com/documentation/concepts/glossary/) (<https://info.mobilerobot.com/documentation/concepts/glossary/>) for term definitions.

Does the J1600 support VDA 5050?

Yes — full [VDA 5050](https://info.mobilerobot.com/products/software/vda-5050/) support is included in the Advanced software. VDA 5050 is the interoperability interface that lets mobile robots from different vendors work together in the same space under a compatible fleet layer. The company works with established VDA 5050 fleet-management providers. No exact VDA 5050 version, API schema, authentication model, supported fleet-manager list, or integration certification is published.

Is there an API?

Yes. The Advanced software includes a [REST API](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) for integration with other systems and equipment.

Do I need a WMS or fleet manager to run the robot?

No. Basic use requires no warehouse-management system, fleet manager, or IT integration of any kind, and Wi-Fi is optional. [Integration is a choice you make when the application grows](https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/), not a prerequisite.

What is Fleet Manager?

[Per-robot software for orchestrated multi-robot deployments](https://info.mobilerobot.com/products/software/fleet-manager/), available with the Advanced software. It is priced per robot.

What automation functions come at each level?

Level	Functions
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; automatic charging; VDA 5050 fleet management; API integrations

Come to me (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>) calls the robot to your location using a mobile app or web interface. Automatic charging is covered in [Charging and battery](https://info.mobilerobot.com/support/faq/charging-and-battery/) (<https://info.mobilerobot.com/support/faq/charging-and-battery/>).

Can I upgrade from Standard to Advanced later?

Yes, but plan ahead: the upgrade is easiest to install at the factory when the robot is ordered. A partner can perform the upgrade later; the customer cannot perform it.

What does the software cost?

2026 end-user list prices:

Software item	List price
Upgrade to Advanced software	€14,500
Fleet Manager, per robot	€6,500

See [Pricing and purchasing](https://info.mobilerobot.com/support/faq/pricing-and-purchasing/) (<https://info.mobilerobot.com/support/faq/pricing-and-purchasing/>) for the complete price list.

Can robots from other brands share the space?

Yes, through [VDA 5050](https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/>): the interface allows robots from different vendors to coexist under a compatible fleet-management layer.



Installation

Common questions about [getting a J1600 running](https://info.mobilerobot.com/documentation/getting-started/j1600-quick-start-guide/) in your facility.

Does the J1600 really work out of the box?

Yes. The standard J1600 is [ready to use on delivery](https://info.mobilerobot.com/documentation/getting-started/delivery-and-unpacking/): no building modifications, tracks, wires, or reflectors; [Wi-Fi optional](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/); no mandatory [WMS, fleet-manager, or IT integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/). An on-device or online tutorial guides the [first-time setup](https://info.mobilerobot.com/documentation/getting-started/first-time-setup/). [Typical setup takes hours or one day](https://info.mobilerobot.com/applications/results/faster-deployment/), [depending on scope](https://info.mobilerobot.com/applications/planning/deployment-scope-examples/).

What are the basic setup steps?

1. Power on the J1600 and follow the on-screen tutorial.
2. [Drive manually through the facility](https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/) with the tiller — the robot learns the environment continuously while you drive.
3. Drive to each desired autonomous [floor-drop point](https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/).
4. **Tap Save location, name the point** [\(https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/\)](https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/), and repeat for all destinations.

There is no software limit on saved locations. See [Navigation and mapping](https://info.mobilerobot.com/support/faq/navigation-and-mapping/).

How much training do operators need?

[About 30 minutes](https://info.mobilerobot.com/documentation/getting-started/operator-training/) for an operator who already uses an electric pallet jack. The manual behavior is

deliberately familiar, and [task creation](https://info.mobilerobot.com/documentation/user-guides/task-management/) (<https://info.mobilerobot.com/documentation/user-guides/task-management/>) is no-code touchscreen work.

What does my facility need to provide?

- [indoor operation](https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/) (<https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/>), 5–40 °C (41–104 °F), 20–80% relative humidity, non-condensing;
- [level floors for autonomous driving](https://info.mobilerobot.com/applications/planning/ro-ute-and-floor-suitability/) (<https://info.mobilerobot.com/applications/planning/ro-ute-and-floor-suitability/>) (0% automatic gradeability), flatness to TR34 FM3 (FF 25 / FL 20);
- bumps no higher than 25 mm and gaps no wider than 20 mm on autonomous routes;
- [power for the manual or automatic charger](https://info.mobilerobot.com/documentation/installation/charger-installation/) (<https://info.mobilerobot.com/documentation/installation/charger-installation/>) — see [Charging and battery](https://info.mobilerobot.com/support/faq/charging-and-battery/) (<https://info.mobilerobot.com/support/faq/charging-and-battery/>).

The robot's ingress protection is IP21.

Is there a formal installation service?

Yes — an optional five-day [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/>) at €10,000 end-user list price, designed to reduce go-live risk:

Phase	Content
Pre-installation	Feasibility check for all selected tasks and loads; risk assessment; project plan
Day 1	Unboxing; Wi-Fi connection if desired; automatic-charging setup if purchased; creation of up to 25 drop points; task validation; safety validation
Day 2	Group training for all operators; individual hands-on practice for up to six operators
Days 3–4	Performance monitoring; on-site troubleshooting and support; additional operator training as needed
Day 5	Acceptance test; handover

Add-ons include integration with other software or equipment, additional validated drop points, and [Fleet Management System setup](https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/) (https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/).

Do I need the commissioning package to use the robot?

No. The package is an optional deployment service — it should not be confused with the machine's basic out-of-box usability. Many deployments need only the basic setup steps above.

Can I try the J1600 before installing it permanently?

Yes. 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/) (€4,000, including setup and support) is available, you can test 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/), 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/) can be run at your own plant. See [Pricing and purchasing](https://info.mobilerobot.com/support/faq/pricing-and-purchasing/) (https://info.mobilerobot.com/support/faq/pricing-and-purchasing/) and [Partners and availability](https://info.mobilerobot.com/support/faq/partners-and-availability/) (https://info.mobilerobot.com/support/faq/partners-and-availability/).

Who performs the installation?

Local partners (<https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/>) deliver demonstrations, trials, deployment, and service, with the company supplying training, parts, software, and technical support. See Partners and availability (<https://info.mobilerobot.com/support/faq/partners-and-availability/>).

Pricing and Purchasing

Common questions about [what the J1600 costs](https://info.mobilerobot.com/products/j1600/pricing-and-roi/) (<https://info.mobilerobot.com/products/j1600/pricing-and-roi/>), and how to buy one. All prices are 2026 end-user list prices in euros.

What does the J1600 cost?

The J1600 self-driving pallet jack starts at **€65,000**.

What is the full price list?

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, per robot per year	€4,900
Full Care, per robot per year	€13,000
On-site support, per day plus travel	€2,400

Prices are time-sensitive; confirm current figures with the company or a [local partner](https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/) (<https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/>).

What does a typical configuration cost?

Around or below €80,000. Two reference configurations at list price:

- J1600 + manual charger + [installation and commissioning](https://info.mobilerobot.com/products/buying-and-deployment/installation-and-commissioning/): **€78,600**;
- J1600 + automatic charger + installation and commissioning: **€83,400**.

A charger is not included with the base robot — see [Charging and battery](https://info.mobilerobot.com/support/faq/charging-and-battery/).

Can I try it before buying?

Yes, three ways:

- a hands-on **demo** (<https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/>) (30–60 minutes) at a partner experience center or your site;
- a **two-week paid trial** (<https://info.mobilerobot.com/products/buying-and-deployment/two-week-trial/>) for €4,000 including setup and support, with free return at any time, no questions asked;
- a **proof of concept** (<https://info.mobilerobot.com/applications/planning/proof-of-concept-planning/>) at the [Copenhagen demo area](https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/) or at your own plant.

See [Partners and availability](https://info.mobilerobot.com/support/faq/partners-and-availability/).

How do I buy one?

List prices are public, and you can request or book demos, trials, and [purchases](https://info.mobilerobot.com/products/buying-and-deployment/request-a-quote/) through www.mobilerobot.com. The company **does not sell robots directly to end users** — inquiries are routed to the distributor, integrator, or service partner covering your area, and at purchase you choose an after-sales package. See [Service and warranty](https://info.mobilerobot.com/support/faq/service-and-warranty/).

What is the return on investment?

The J1600 saves up to 80% of the manual work and operator time (<https://info.mobilerobot.com/applications/results/productivity-improvements/>) on repetitive transport — not 80% of every process. The economics are designed to work for a single-shift SME operating eight hours per day, five days per week. The €65,000 entry price contrasts with full automation projects, which can reach approximately €1 million once WMS-to-fleet-manager integration (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>) is included. A complete ROI model (wage assumptions, utilization, maintenance, financing, payback period) is not available — build the business case on your own site figures.

What benefits count beyond labor savings?

Non-labor benefits (<https://info.mobilerobot.com/products/j1600/features-and-benefits/>) include fewer workplace accidents, injuries (<https://info.mobilerobot.com/applications/results/safety-improvements/>), and product damage; higher employee satisfaction from removing repetitive walking (<https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/>); better inventory tracking and control in an automated process; steadier material flow and throughput; more productive use of skilled labor; easier response to labor shortages (<https://info.mobilerobot.com/applications/results/labor-reallocation/>); and lower implementation and change risk than rigid full automation.

How does it compare economically with the alternatives?

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

See [Dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (https://info.mobilerobot.com/products/j1600/dual-mode/) for why the product targets 80% automation rather than 100%.

Service and Warranty

Common questions about supporting a J1600 after purchase.

What support plans are available?

Three standard packages, chosen at purchase. On-site service is separate in all three.

Free Plan

- no fixed annual payment;
- service and parts purchased as needed at list price;
- first-year warranty;
- first-year software upgrades;
- online self-help portal.

Basic Care Plan — €4,900 per robot per year

- software upgrades while the plan is active;
- unlimited remote support;
- first-year warranty included;
- 10% discount on list prices for parts.

Full Care Plan — €13,000 per robot per year

- extended warranty while the plan is active;
- software upgrades;
- free replacement of parts worn or broken in normal use;
- 10% discount on replacement for accidental damage or misuse;
- free loan robot when a repair lasts more than two business days;
- unlimited priority remote support.

Is an after-sales agreement mandatory?

No. The agreement is optional — the Free Plan carries no annual payment, and service and parts can be bought as needed.

What warranty does the J1600 come with?

The first year of warranty is included in every plan, including the Free Plan. The Full Care Plan extends the warranty for as long as the plan is active.

How do I get help with a technical issue?

Directly from the machine: open the **Help/Support** menu on the touchscreen and scan the QR code to send a technical request straight to support. The support portal also accepts tickets and device-log uploads, and remote support is available directly from the company. Under Basic Care and Full Care, remote support is unlimited.

Who services the robot locally?

[Your local partner](https://info.mobilerobot.com/support/contact/find-a-service-partner/) (<https://info.mobilerobot.com/support/contact/find-a-service-partner/>). Partners employ [field-service technicians with current product training](https://info.mobilerobot.com/support/training/technician-training/) (<https://info.mobilerobot.com/support/training/technician-training/>), deliver installation and on-site service, and can see and create support tickets for their customers. The company supplies parts, software, and technical support behind them. See [Partners and availability](https://info.mobilerobot.com/support/faq/partners-and-availability/) (<https://info.mobilerobot.com/support/faq/partners-and-availability/>).

What does on-site support cost?

€2,400 per day plus travel, at 2026 end-user list price. See the full price list in [Pricing and purchasing](https://info.mobilerobot.com/support/faq/pricing-and-purchasing/) (<https://info.mobilerobot.com/support/faq/pricing-and-purchasing/>).

What happens if my robot needs a long repair?

Under the Full Care Plan, you receive a free loan robot when a repair lasts more than two business days.

Are software upgrades included?

First-year [software upgrades](https://info.mobilerobot.com/documentation/service-maintenance/software-updates/) (<https://info.mobilerobot.com/documentation/service-maintenance/software-updates/>) are included in every plan. Basic Care and Full Care include software upgrades for as long as the plan is active. The upgrade from Standard to [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>) is a separate purchase — see [Software and integrations](https://info.mobilerobot.com/support/faq/software-and-integrations/) (<https://info.mobilerobot.com/support/faq/software-and-integrations/>).

Partners and Availability

Common questions about where you can get the J1600 and how the [partner channel works](https://info.mobilerobot.com/partners/program/program-overview/) (<https://info.mobilerobot.com/partners/program/program-overview/>).

Is the J1600 available in my country?

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 and was expanding the network. Confirm availability, prices, taxes, currencies, delivery times, and certification details for your market with the company or a [local partner](https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/) (<https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/>).

Can I buy directly from The Mobile Robot Company?

No. List prices are public and you can request demos, trials, and [purchases](https://info.mobilerobot.com/products/buying-and-deployment/request-a-quote/) (<https://info.mobilerobot.com/products/buying-and-deployment/request-a-quote/>) through www.mobilerobot.com (<https://www.mobilerobot.com>), but 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/>). Inquiries are routed to a distributor, integrator, or service partner, who owns the local relationship. See [Pricing and purchasing](https://info.mobilerobot.com/support/faq/pricing-and-purchasing/) (<https://info.mobilerobot.com/support/faq/pricing-and-purchasing/>).

What do partners do?

Partners deliver local demonstrations, trials, sales, installation, service, and ongoing customer support. The company supplies robots, spare parts, software, training, technical support, marketing materials, and leads. Partners employ [field-service technicians with current product training](https://info.mobilerobot.com/support/training/technician-training/) (<https://info.mobilerobot.com/support/training/technician-training/>) and appoint an internal product champion as the main expert contact.

What is an experience center?

A partner-maintained showroom with a dedicated robot, pallets, and chargers, where customers get [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/>). A standard demo takes 30–60 minutes; a first-time visitor can typically send the robot on an autonomous task within about 15 minutes.

What does the customer journey look like?

Four steps, of which the first two can be skipped (for example by repeat customers):

1. **Demo** — 30–60 minutes hands-on at an experience center or your site.
2. **Trial** — 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/>) with free return at any time, no questions asked.
3. **Purchase** — the robot and [selected options](https://info.mobilerobot.com/products/chargers-and-accessories/available-options/) (<https://info.mobilerobot.com/products/chargers-and-accessories/available-options/>).
4. **After-sales service** — an optional ongoing service agreement. See [Service and warranty](https://info.mobilerobot.com/support/faq/service-and-warranty/) (<https://info.mobilerobot.com/support/faq/service-and-warranty/>).

Can I test the robot before rolling it out?

Yes. Beyond demos and the two-week trial, you can test 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/>) — used for validation under intentionally real-world conditions such as uneven flooring and water-filled loads — or run 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 your own plant with machines brought to your site. See [Installation](https://info.mobilerobot.com/support/faq/installation/) (<https://info.mobilerobot.com/support/faq/installation/>).

Who can become a partner?

Qualified [integrators, distributors, and service partners](https://info.mobilerobot.com/partners/program/partner-types/) (<https://info.mobilerobot.com/partners/program/partner-types/>) [can apply by country](https://info.mobilerobot.com/partners/program/application-process/) (<https://info.mobilerobot.com/partners/program/application-process/>). The program looks for [organizations whose primary business naturally complements the robots](https://info.mobilerobot.com/partners/become-a-partner/who-we-are-looking-for/) (<https://info.mobilerobot.com/partners/become-a-partner/who-we-are-looking-for/>), such as manual-fork-truck or automated-material-handling businesses. Partners are expected to maintain an experience center, keep product in

stock, offer the full range of products and services including paid trials and after-sales contracts, and participate in recurring joint business planning.

What does the partnership offer commercially?

Partners earn [product margin plus software and service revenue](https://info.mobilerobot.com/partners/program/why-partner-with-us/) (<https://info.mobilerobot.com/partners/program/why-partner-with-us/>): after-sales business flows through the partner, who keeps the revenue from local human services while the company supplies parts and software. Current partner pricing, discount tiers, and program terms are available from the partner team. The relationship is non-exclusive at partner level.

How do I apply?

[Contact the company](https://info.mobilerobot.com/partners/become-a-partner/contact-the-partner-team/) (<https://info.mobilerobot.com/partners/become-a-partner/contact-the-partner-team/>), at hello@mobilerobot.com or through www.mobilerobot.com (<https://www.mobilerobot.com>) to discuss joining the network. See the [partner section](https://info.mobilerobot.com/category/partners/) (<https://info.mobilerobot.com/category/partners/>) for more on the program.

Troubleshooting

Symptom-by-symptom guidance for diagnosing and resolving common J1600 issues, from startup and charging to navigation and connectivity.



Robot Will Not Start

What to check when the J1600 does not power on, including the key switch position, battery charge level, and emergency-stop controls.



Robot Will Not Enter Autonomous Mode

Preconditions the J1600 needs before it switches to autonomous driving, and what to check when the mode change does not happen.



Navigation Problems

What to check when the J1600 hesitates, detours, or cannot reach a destination, including map freshness, blocked routes, and floor conditions.



Mapping Problems

How the J1600 builds and updates its 3D map by manual driving, and what to do when locations are missing or the map is out of date.



Obstacle or Safety-Field Stops

Why the J1600 stops when people or objects enter its 360-degree safety field, what the blue lights mean, and how to resume a stopped task.



Charging Problems

Expected J1600 charge and drain rates, manual versus automatic charging behavior, and what to check when the battery does not charge.



Task and Location Problems

Fixes for missing destinations, unexpected post-delivery behavior, and drop-height confusion when creating tasks on the J1600.



Connectivity Problems

Which J1600 functions work without Wi-Fi, which features depend on connectivity, and how to think about network issues on site.

Robot Will Not Start

Work through these checks in order when the J1600 does not power on or does not respond. If the robot still does not start afterwards, contact support through the channels on [Submit a support request](https://info.mobilerobot.com/support/contact/submit-a-support-request/) (<https://info.mobilerobot.com/support/contact/submit-a-support-request/>).

Check the key switch

The J1600 has 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/>): power off, manual only, and automatic mode. If the switch is in the power-off position, the robot has no power. Turn the key to the manual or automatic position before expecting any response from the vehicle.

Check the battery charge

The J1600 runs on a [24 V, 200 Ah lithium iron phosphate \(LiFePO4\) battery](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/>). Even when idle, the battery drains at approximately 2% per hour in standby, so a robot left unplugged for an extended period — a weekend or a holiday — can arrive at a depleted battery.

To recover:

1. Plug in the manual charger, or send the robot to its automatic charging station if one is installed.
2. Allow time to charge. The charging rate is approximately 47 percentage points per hour, so a full charge from empty takes a little over two hours.

See [Charging problems](https://info.mobilerobot.com/support/troubleshooting/charging-problems/) (<https://info.mobilerobot.com/support/troubleshooting/charging-problems/>) if the battery does not charge as expected.

Check the emergency-stop controls

The J1600 has [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/>), and the [tiller position](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/>).

mobilerobot.com/safety-compliance/safety-functions/tiller-detection/) also acts as an emergency-stop control. Make sure no emergency-stop button is engaged and the tiller is in a normal operating position before trying to start the robot.

 WARNING

Do not open the chassis or attempt electrical repairs yourself. Service and repairs are handled through your service partner — see [Find a service partner](https://info.mobilerobot.com/support/contact/find-a-service-partner/) (<https://info.mobilerobot.com/support/contact/find-a-service-partner/>).

Still not starting

If the key switch, battery, and emergency stops all check out and the robot still does not power on, submit a support request. The on-machine route is normally unavailable if the robot has no power, so use the support portal or contact your service partner directly.

Robot Will Not Enter Autonomous Mode

The J1600 only drives autonomously when the operator has explicitly handed it a task and [confirmed the mode change](https://info.mobilerobot.com/documentation/getting-started/manual-and-autonomous-modes/) (<https://info.mobilerobot.com/documentation/getting-started/manual-and-autonomous-modes/>). Most failures to enter autonomous mode come down to one of the preconditions below.

Confirm the key switch position

The [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. In the manual-only position the robot never drives itself. Turn the key to the automatic position.

Select a task and confirm it

[Autonomous driving](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>) always starts from a task:

1. Create or select a task on the touchscreen, with a saved destination.
2. Execute the task. The robot asks for confirmation to enter automatic mode.
3. Confirm using the physical LED start/resume button. On-screen selection alone does not start autonomous driving.

If the destination you need is not in the list, it has not been saved yet — see [Task and location problems](https://info.mobilerobot.com/support/troubleshooting/task-and-location-problems/) (<https://info.mobilerobot.com/support/troubleshooting/task-and-location-problems/>).

Step clear of the robot

After confirmation, the interface instructs the operator to step away. The robot's 360-degree safety field must be clear before it moves. If you or anyone else is standing inside the protected area — shown by the blue floor lights — the robot will not drive off. See [Obstacle or safety-field stops](https://info.mobilerobot.com/support/troubleshooting/obstacle-or-safety-field-stops/) (<https://info.mobilerobot.com/support/troubleshooting/obstacle-or-safety-field-stops/>).

Release the tiller

Grabbing or moving the tiller is the [takeover mechanism](https://info.mobilerobot.com/safety-compliance/safety-overview/emergency-stops-and-manual-takeover/) that returns the J1600 to manual control, and [tiller-position switches](https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/) are part of the safety system. Make sure the tiller is released and in its normal position when you confirm automatic mode.

Check the floor

Autonomous mode is a [level-floor application](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/): automatic gradeability is 0%. Slopes, ramps, and dock plates are manual territory. If the task would send the robot up or down a gradient, [drive that portion manually](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) instead.

Still stuck in manual mode

If all preconditions are met and the robot still refuses the mode change, contact support — see [Submit a support request](https://info.mobilerobot.com/support/contact/submit-a-support-request/). For how the mode handover is designed to work, see [Dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/).

Navigation Problems

The J1600 navigates with [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (simultaneous localization and mapping) on an industrial NVIDIA Jetson AI computer. It builds and continuously updates a three-dimensional map of the facility while an operator drives it manually, then plans its own routes to saved destinations — without tracks, wires, reflectors, or other building modifications. When navigation misbehaves, check the points below.

The layout has changed

The robot updates its understanding of the environment continuously during manual driving. After a major [layout change](https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/) — moved racking, new walls, relocated work cells — drive the robot manually through the changed area so it can refresh its map. Everyday changes such as parked pallets and moving people are handled by obstacle avoidance and do not require remapping. See [Mapping problems](https://info.mobilerobot.com/support/troubleshooting/mapping-problems/).

The route is blocked

The J1600 detects obstacles and routes around them in dynamic environments. If a route is fully blocked, [clear the obstruction](https://info.mobilerobot.com/support/troubleshooting/obstacle-or-safety-field-stops/) or take over manually with the tiller — improvising a path through a [crowded floor](https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/) is exactly the kind of judgment the operator keeps in a [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) vehicle.

Preferred travel zones can be defined so the robot favors safer routes through production areas.

The floor is outside specification

Autonomous driving assumes an [indoor, level floor](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/):

Condition	Limit
Gradeability, automatic mode	0° / 0%
Maximum traversable bump height	25 mm / 1 in
Maximum traversable gap width	20 mm / 0.8 in
Floor flatness/levelness	TR34 FM3 (FF 25 / FL 20)

Slopes and dock plates are handled in [manual mode](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>), where gradeability is 5% unloaded and 3% at full load.

The environment is outside specification

The J1600 is rated IP21 and operates at 5–40 °C (41–104 °F) with 20–80% non-condensing relative humidity. Cold stores, outdoor yards, and wet areas fall outside the [operating envelope](https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/) (<https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/>). See the full [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Still misbehaving

If navigation problems persist on a compliant floor with a current map, contact support — see [Submit a support request](https://info.mobilerobot.com/support/contact/submit-a-support-request/) (<https://info.mobilerobot.com/support/contact/submit-a-support-request/>).

Mapping Problems

The J1600 [maps by driving](https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/) (<https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/>): an operator drives it manually through the facility with the tiller, and the robot continuously learns and updates a three-dimensional model of its environment using [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>). No tracks, wires, reflectors, or building modifications are involved. Most mapping problems are coverage problems.

The robot does not know an area

The robot only knows areas it has been driven through. To extend coverage, drive it manually through every aisle and zone it should later travel autonomously. The 3D LiDAR scans environmental structures at heights of up to 70 m above the vehicle, so large halls are mapped from floor level without extra equipment.

A destination is missing

Destinations are [saved locations](https://info.mobilerobot.com/documentation/user-guides/location-management/) (<https://info.mobilerobot.com/documentation/user-guides/location-management/>), not map annotations made at a desk:

1. Drive the robot manually to the exact drop point.
2. Tap **Save location** on the touchscreen.
3. Name the point — for example "Pallet Bay 1".

There is no software limit on the number of saved locations; the practical limit is your floor space. Saved points can be freely recombined into tasks without teaching every origin-destination pair. See [Task and location problems](https://info.mobilerobot.com/support/troubleshooting/task-and-location-problems/) (<https://info.mobilerobot.com/support/troubleshooting/task-and-location-problems/>).

The map is out of date

After a significant [layout change](https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/) (<https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/>), drive the robot manually through the changed area so the map refreshes. Day-to-day clutter does not require this — obstacle avoidance deals with

temporary objects, which is what makes the J1600 suitable for [brownfield sites](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>) and changing layouts.

A location has physically moved

If a [drop point](https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/) (<https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/>) moves — a staging area is relocated, a buffer zone shifts — drive to the new position and save it again. Adding or moving a location takes minutes and needs no automation expert.

Still having trouble

If the robot cannot localize or [repeatedly loses its way in a mapped area](https://info.mobilerobot.com/support/troubleshooting/navigation-problems/) (<https://info.mobilerobot.com/support/troubleshooting/navigation-problems/>), contact support — see [Submit a support request](https://info.mobilerobot.com/support/contact/submit-a-support-request/) (<https://info.mobilerobot.com/support/contact/submit-a-support-request/>).

Obstacle or Safety-Field Stops

A J1600 that stops during [an autonomous task](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) is usually doing its job. The vehicle carries a 360-degree protective field, monitored by two 2D safety LiDAR scanners and an independent safety controller, and it stops when a person or object enters that field. This page explains the behavior and how to get moving again.

How the safety field behaves

- The protective field surrounds the vehicle and supports both forward and reverse autonomous travel.
- The field is [speed-dependent](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/): it expands as travel speed increases.
- Blue light strips project the current protected area onto the floor. White lights indicate manual mode.
- [Person detection](https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) and [braking](https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) are certified safety functions within the layered safety architecture. For the design, see [How J1600 safety works](https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/).

Resuming after a stop

1. Clear the safety field — step out of the protected area and remove any obstruction.
2. Press the LED start/resume button to continue the task.

The robot also [avoids obstacles](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) on its own: where a path exists, it routes around objects and people rather than stopping. A full stop typically means the field itself was breached or [no clear route remained](https://info.mobilerobot.com/support/troubleshooting/navigation-problems/).

Frequent stops on a route

If a route triggers constant stops:

- Reduce congestion on the route, or define preferred travel zones so the robot favors calmer paths through production areas.
- For [genuinely crowded areas](https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/) (https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/), — an overflowing receiving zone at truck arrival, for example — take over with the tiller and drive the congested portion manually. Immediate manual takeover is a core part of [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (https://info.mobilerobot.com/products/j1600/dual-mode/).

Other stop controls

Stops can also come from deliberate controls rather than the safety field:

- [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/);
- the belly button on the tiller, which stops the vehicle and reverses it away from the operator;
- grabbing or moving the tiller, which returns the robot to manual control;
- [tiller-position switches](https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/) (https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/), which act as emergency-stop and manual-control inputs.

Check whether one of these was activated before assuming a fault.

When it is not safety behavior

If the robot stops with a clear field, no engaged stop control, and a valid route, contact support — see [Submit a support request](https://info.mobilerobot.com/support/contact/submit-a-support-request/) (https://info.mobilerobot.com/support/contact/submit-a-support-request/).

Charging Problems

The J1600 uses a [24 V, 200 Ah lithium iron phosphate \(LiFePO4\) battery](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) and supports [two charging methods](https://info.mobilerobot.com/documentation/user-guides/charging/): manual plug-in charging and an optional automatic charging station. Before treating charging behavior as a fault, compare it with the expected rates below.

Expected rates

Behavior	Rate
Charging	approximately 47 percentage points per hour
Drain, driving fully loaded	approximately 13% per hour
Drain, driving unloaded	approximately 12% per hour
Drain, standby	approximately 2% per hour

Runtime exceeds eight hours in a typical duty cycle. The drain rates imply roughly 7.7 hours of continuous fully loaded driving or 8.3 hours unloaded, but these are calculated figures, not guaranteed runtimes — standby time, lifting, duty cycle, battery reserve, and operating conditions all affect the result.

A battery that loses around 2% per hour while the robot sits idle is behaving normally, not leaking charge. A robot parked unplugged over a weekend can reasonably arrive at a low battery — see [Robot will not start](https://info.mobilerobot.com/support/troubleshooting/robot-will-not-start/).

Manual charging

[Manual charging](https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/) works like a conventional electric pallet jack: plug in the charger during a break or whenever the machine is idle. If the robot does not charge, verify that the charger is connected at both ends and powered.

Automatic charging does not happen

[Automatic charging](https://info.mobilerobot.com/applications/scenarios/automatic-charging/) (<https://info.mobilerobot.com/applications/scenarios/automatic-charging/>) is an optional, advanced automation capability that requires the automatic charger. When it works, the robot drives to the station, positions itself at the charger, and a charging interface extends to the vehicle's charging plates — enabling opportunity charging whenever the robot is not busy.

If the robot never charges itself, check that:

- an [automatic charger](https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/) (<https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/>) was actually purchased — the manual charger does not support self-docking;
- [the station was set up](https://info.mobilerobot.com/documentation/installation/charger-installation/) (<https://info.mobilerobot.com/documentation/installation/charger-installation/>) and commissioned. When bought with the installation and commissioning package, automatic-charging setup is part of Day 1 on site.

Unresolved charging faults

For a charger that stays dead, a battery that will not accept charge, or a robot that fails to dock despite a commissioned station, contact support — see [Submit a support request](https://info.mobilerobot.com/support/contact/submit-a-support-request/) (<https://info.mobilerobot.com/support/contact/submit-a-support-request/>).

WARNING

Do not open the battery compartment or service the charger yourself. Battery and charger service goes through [your service partner](https://info.mobilerobot.com/support/contact/find-a-service-partner/) (<https://info.mobilerobot.com/support/contact/find-a-service-partner/>).

Task and Location Problems

Tasks on the J1600 are built from [saved locations](https://info.mobilerobot.com/documentation/user-guides/location-management/) and a chosen post-delivery behavior, all from the touchscreen. Most task problems trace back to how the task was created rather than to a fault.

A destination is not in the list

Only saved locations appear as destinations. To add one, [drive the robot manually to the point, tap **Save location**, and name it](https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/). There is no software limit on the number of saved locations. See [Mapping problems](https://info.mobilerobot.com/support/troubleshooting/mapping-problems/) for coverage and re-saving moved locations.

The robot will not drop at height

This is by design. Autonomous pallet delivery is at floor level. Picking and dropping at heights up to 1,600 mm (63 in) is a manual capability, performed by the operator with the tiller. If a task seems to need an elevated autonomous drop, restructure it so the robot delivers at floor level and an operator handles any elevated placement.

The robot will not pick up a pallet by itself

Also by design: pallet pickup is always manual. [The operator judges pallet condition, load stability, and fork placement](https://info.mobilerobot.com/safety-compliance/safe-deployment/operator-responsibilities/), then hands the transport portion to the robot. See [Dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) for the reasoning.

The robot does the wrong thing after delivering

What happens after the drop is part of the task definition. When creating a task you choose among the [post-delivery behaviors](https://info.mobilerobot.com/documentation/user-guides/task-management/): return to the origin or operator, go to another saved point or

to parking, or stop and wait at the destination. If the robot waits when you expected it back, check which option the task uses — the common patterns are:

- **Boomerang** (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>) — deliver and return to origin.
- **Simple ABC** (<https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/>) — deliver from A to B, then travel to C.
- **Drop and wait** (<https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/>) — deliver and remain at the destination.
- **Deliver and park** (<https://info.mobilerobot.com/applications/scenarios/deliver-and-park/>) — deliver, then proceed to a parking location.

Come-to-me does not work

[Calling the robot to you](https://info.mobilerobot.com/applications/scenarios/come-to-me/) (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>) through a mobile app or web interface is an advanced automation function. If it is unavailable, your robot may be running the [Standard software](https://info.mobilerobot.com/products/software/standard-software/) (<https://info.mobilerobot.com/products/software/standard-software/>); ask your partner about the Advanced software. See [Software upgrade entitlements](https://info.mobilerobot.com/support/service-warranty/software-upgrade-entitlements/) (<https://info.mobilerobot.com/support/service-warranty/software-upgrade-entitlements/>).

The load itself is the problem

The J1600 requires an [open-base carrier with no bottom deck board](https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/) (<https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/>), within a 1,250 x 1,250 mm footprint (including overhang) and a load height of up to 1,700 mm from the floor, at up to 1,600 kg. A task that fails with a specific pallet type may be a compatibility issue rather than a task issue — see the [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Unresolved task problems

If tasks fail despite correct locations and settings, contact support — see [Submit a support request](https://info.mobilerobot.com/support/contact/submit-a-support-request/) (<https://info.mobilerobot.com/support/contact/submit-a-support-request/>).

Connectivity Problems

The J1600 is designed so that basic operation does not depend on a network. If you are troubleshooting a network issue, the first question is whether the affected function actually needs connectivity.

What works without Wi-Fi

Wi-Fi is optional for basic use (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>). The out-of-the-box workflow — manual driving, mapping by driving, saving locations, creating and running tasks from the touchscreen, autonomous delivery — requires neither Wi-Fi nor any mandatory warehouse-management-system (WMS), fleet-manager, or IT integration (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>). A network outage does not stop a robot running standard teach-and-repeat (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>) tasks.

What depends on connectivity

Connectivity comes into play with the advanced capabilities:

- **Come-to-me** (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>) — calling the robot through a mobile app or web interface.
- **VDA 5050** (<https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/>), **fleet management** — operating the J1600 under a compatible multi-vendor fleet layer.
- **REST API integrations** (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>) — connecting the robot to other software or equipment.
- **Fleet Manager** (<https://info.mobilerobot.com/products/software/fleet-manager/>) — orchestrating multiple robots.

These belong to the Advanced software (<https://info.mobilerobot.com/products/software/advanced-software/>); see Software upgrade entitlements (<https://info.mobilerobot.com/support/service-warranty/software-upgrade-entitlements/>). If fleet coordination or app-based calls

stop working while on-screen tasks run normally, investigate the site network and the fleet or integration layer rather than the robot's basic functions.

Wi-Fi during commissioning

Connecting the robot to Wi-Fi is optional and, when wanted, is part of Day 1 of the installation and commissioning package.

Getting help

Remote support is easier to deliver when the robot can be reached, but a support request never requires the robot to be online — the support portal and [your service partner](https://info.mobilerobot.com/support/contact/find-a-service-partner/) (<https://info.mobilerobot.com/support/contact/find-a-service-partner/>) are always available. See [Submit a support request](https://info.mobilerobot.com/support/contact/submit-a-support-request/) (<https://info.mobilerobot.com/support/contact/submit-a-support-request/>).

Training

Training paths for J1600 operators and service technicians, plus the company's video tutorials.



Operator Training

How J1600 operators are trained — about 30 minutes for an existing pallet-jack operator, with on-device tutorials and structured training during commissioning.



Technician Training

How J1600 service technicians are trained — partner field-service technicians hold current product training, backed by a two-day workshop and unlimited remote support.



Training Videos

Short public videos that show how to operate the J1600 — adding drop locations, creating tasks, charging, and common task patterns.

Operator Training

The J1600 is built so that an existing electric-pallet-jack operator needs about **30 minutes of training** to use it. No code, no configuration screens — operation happens through the tiller and a [15-inch multi-touch display](https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/>).

What an operator learns

- [driving manually with the tiller](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>), which handles like a conventional walk-behind electric pallet jack;
- [saving locations](https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/) (<https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/>) by driving to a point and tapping **Save location**;
- creating tasks: choosing a destination and what the robot does after the drop;
- [confirming autonomous mode](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>) with the physical start/resume button and stepping clear;
- taking over at any time by grabbing the tiller, and using the stop controls.

At [demonstrations](https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/) (<https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/>), a first-time user is typically able to send the robot on an autonomous task within roughly 15 minutes. See the [J1600 overview](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>) for the full workflow.

Self-paced learning

An operator tutorial is available on the device itself and online. Short video walk-throughs cover the most common procedures — see [Training videos](https://info.mobilerobot.com/support/training/training-videos/) (<https://info.mobilerobot.com/support/training/training-videos/>).

Training during commissioning

If you purchase the [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/>), operator training is built

into the five-day program:

- **Day 2:** group training for all operators, plus individual hands-on practice for up to six operators.
- **Days 3–4:** additional operator training as needed, alongside performance monitoring and on-site support.

Training during a trial

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/) includes one full day of on-site deployment and training support, so trial operators start with the same fundamentals.

Safety expectations

[Operators keep specific responsibilities](https://info.mobilerobot.com/documentation/user-guides/operator-manual/) (https://info.mobilerobot.com/documentation/user-guides/operator-manual/) in a [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (https://info.mobilerobot.com/products/j1600/dual-mode/) vehicle: judging loads, confirming the mode change, and stepping clear before autonomous travel. See [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/).

Technician Training

Service on the J1600 is performed by trained field-service technicians employed by service partners. This page describes how that training is organized.

Who is trained

Partners in the distribution network employ field-service technicians and keep their product training current — it is one of the standing expectations of a service partner. Customers do not service the robot themselves; even the [Advanced software upgrade](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>) is installed at the factory or by a partner, never by the customer.

How partner technicians are trained

New partners receive a **two-day sales and service training workshop** from The Mobile Robot Company as part of partner onboarding. After the workshop, partners have **unlimited remote support** from the company's technical team, plus on-site deployment-support days for early installations. Further support days can be purchased when needed.

Each partner also appoints an internal product **Champion** — the resident expert and main technical contact for that partner.

What this means for customers

When a technician arrives on site, the work is backed by the company's parts supply, software, and technical support. See [On-site support](https://info.mobilerobot.com/support/service-warranty/on-site-support/) (<https://info.mobilerobot.com/support/service-warranty/on-site-support/>) for how visits are arranged and priced, and [Find a service partner](https://info.mobilerobot.com/support/contact/find-a-service-partner/) (<https://info.mobilerobot.com/support/contact/find-a-service-partner/>) to get connected with a trained partner.

Organizations interested in [becoming a partner](https://info.mobilerobot.com/partners/program/why-partner-with-us/) (<https://info.mobilerobot.com/partners/program/why-partner-with-us/>) can start at the [partner section](https://info.mobilerobot.com/category/partners/) (<https://info.mobilerobot.com/category/partners/>).



Training Videos

The Mobile Robot Company publishes [short public videos](https://info.mobilerobot.com/newsroom/videos/full-video-library/) (<https://info.mobilerobot.com/newsroom/videos/full-video-library/>) that double as training material. The most instructional ones are listed below; each takes a few minutes and pairs well with the hands-on basics in [Operator training](https://info.mobilerobot.com/support/training/operator-training/) (<https://info.mobilerobot.com/support/training/operator-training/>).

How-to tutorials

Video	What it shows
How to add a drop location and create tasks (https://www.youtube.com/watch?v=OGiOVtdKbk8)	Drive manually to the drop point, tap Save Location, name it, create a task, choose the post-drop behavior, execute, confirm automatic mode, and step back.
How to charge your robot (https://www.youtube.com/watch?v=l6GJO7Kbi4Y)	Manual plug-in charging during a break, and how the optional automatic charger docks the robot for opportunity charging.

Understanding operation

Video	What it shows
What is dual mode (https://www.youtube.com/watch?v=MgmWCbdoge8)	Manual pallet-jack operation plus automatic mode: pick up manually, choose the drop location, press the go button, step away.
The most common task (https://www.youtube.com/watch?v=b0a0QWWNlws)	Manual pick, autonomous delivery, drop, and return — plus the three standard post-drop options and what the blue light means.
How many pallet locations can I have (https://www.youtube.com/watch?v=RZEsjQgnBvk)	There is no software limit on saved locations; the practical limit is warehouse space.
Extra capabilities of the dual-mode J1600 (https://www.youtube.com/watch?v=HKGv7uzNxIw)	Using manual judgment for sensitive or unstable loads and confined maneuvering, then handing the long transport leg to autonomous mode.
Can anyone automate a pallet move in minutes? (https://www.youtube.com/watch?v=PHBLT4XyvyI)	A first-time user drives the J1600, saves a location, creates a drop-and-return task, and confirms automatic mode.

Support and evaluation

Video	What it shows
How to get help with a technical issue (https://www.youtube.com/watch?v=2Q5NFYGSmhA)	The on-machine Help/Support menu and QR code for sending a technical request, and the three service packages.
From trial to proof of concept (https://www.youtube.com/watch?v=FI0_kXSPRrQ)	Testing in the Copenhagen demo area versus running a proof of concept at your own plant.

For written versions of these procedures, see the [How-To Guides](https://info.mobilerobot.com/documentation/user-guides/how-to-guides/) (<https://info.mobilerobot.com/documentation/user-guides/how-to-guides/>) in the [documentation section](https://info.mobilerobot.com/category/documentation/) (<https://info.mobilerobot.com/category/documentation/>). For support channels, see [Submit a support request](https://info.mobilerobot.com/support/contact/submit-a-support-request/) (<https://info.mobilerobot.com/support/contact/submit-a-support-request/>).

Contact Support

How to reach support, find a service partner near you, and what happens after you submit a request.



Submit a Support Request

The channels for raising a J1600 technical issue — the on-machine QR code, the support portal, and your service partner.



Find a Service Partner

How to get connected with a local J1600 distributor, integrator, or service partner for demos, trials, purchase, and service.



Support Response Process

What happens after you submit a J1600 support request — remote diagnosis, partner involvement, on-site visits, and loan robots during long repairs.



Emergency Contact Guidance

How to stop a J1600 immediately using its emergency controls, and how to report an urgent issue afterwards.

Find a Service Partner

The Mobile Robot Company sells and services the J1600 through an international network of [distributors, integrators, and service partners](https://info.mobilerobot.com/partners/program/partner-types/) (<https://info.mobilerobot.com/partners/program/partner-types/>). [List prices are public](https://info.mobilerobot.com/products/j1600/pricing-and-roi/) (<https://info.mobilerobot.com/products/j1600/pricing-and-roi/>), but 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/>) — every inquiry is routed to a partner who handles the local relationship.

How to get connected

1. [Contact the company](https://info.mobilerobot.com/company/locations/contact-information/) (<https://info.mobilerobot.com/company/locations/contact-information/>), through www.mobilerobot.com (<https://www.mobilerobot.com>) or by email at hello@mobilerobot.com.
2. Your inquiry is assigned to a partner — as a rule of thumb, the partner with the nearest experience center, a showroom with a dedicated robot where you can try the J1600 hands-on.
3. The partner follows up for demonstrations, trials, [quotes](https://info.mobilerobot.com/products/buying-and-deployment/request-a-quote/) (<https://info.mobilerobot.com/products/buying-and-deployment/request-a-quote/>), deployment, and service.

What partners do

Partners deliver [local demonstrations](https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/) (<https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/>) (typically 30–60 minutes, hands-on), [two-week paid trials](https://info.mobilerobot.com/products/buying-and-deployment/two-week-trial/) (<https://info.mobilerobot.com/products/buying-and-deployment/two-week-trial/>), [installation and commissioning](https://info.mobilerobot.com/products/buying-and-deployment/installation-and-commissioning/) (<https://info.mobilerobot.com/products/buying-and-deployment/installation-and-commissioning/>), after-sales service with [trained field-service technicians](https://info.mobilerobot.com/support/training/technician-training/) (<https://info.mobilerobot.com/support/training/technician-training/>), and spare parts — backed by the company's parts supply, software, technical support, and training.

Where partners exist

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 the United States, Canada, Australia, and China. As of June

2026 the company had distributor partnerships in eight countries, with the network expanding. A public list of partners by country is not available — contact the company to be matched with coverage for your location, and confirm country-specific terms, delivery, and service coverage with the partner.

Becoming a partner

Qualified integrators, distributors, and service partners (<https://info.mobilerobot.com/partners/become-a-partner/who-we-are-looking-for/>), can apply by country (<https://info.mobilerobot.com/partners/program/application-process/>). See the partner section (<https://info.mobilerobot.com/category/partners/>).

Emergency Contact Guidance

If a situation with the J1600 requires immediate action, stop the robot first, then report.

Stopping the robot immediately

The J1600 provides several independent ways to stop it at once:

- **Emergency-stop buttons** (<https://info.mobilerobot.com/safety-compliance/safety-overview/emergency-stops-and-manual-takeover/>) — the vehicle has three; press the nearest one.
- **The tiller** — grabbing or moving the tiller returns the robot to manual control immediately, and **tiller-position switches** (<https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/>), also act as an emergency stop.
- **The belly button** — stops the vehicle and reverses it away from the operator.
- **The key switch** — turning it to the power-off position removes power.

The robot also [stops on its own when a person enters its 360-degree protective field](https://info.mobilerobot.com/support/troubleshooting/obstacle-or-safety-field-stops/) (<https://info.mobilerobot.com/support/troubleshooting/obstacle-or-safety-field-stops/>). For how these layers work together, see [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/>).

WARNING

If anyone is injured, follow your site's emergency procedures and contact local emergency services first. This page covers stopping the machine and reporting the issue — it does not replace your site's own emergency and first-aid procedures.

Reporting an urgent technical issue

After the situation is under control:

1. Leave the robot stopped. Do not return it to service until the cause is understood.

2. Contact your service partner directly — the fastest route for urgent local help. See [Find a service partner](https://info.mobilerobot.com/support/contact/find-a-service-partner/) (https://info.mobilerobot.com/support/contact/find-a-service-partner/).
3. Raise a support request so the company's technical team is involved: use the Help/Support QR code on the machine or the support portal. See [Submit a support request](https://info.mobilerobot.com/support/contact/submit-a-support-request/) (https://info.mobilerobot.com/support/contact/submit-a-support-request/).

There is no separate published emergency hotline; urgent issues travel through the partner and the standard support channels, with priority remote support for [Full Care](https://info.mobilerobot.com/support/service-warranty/full-care/) (https://info.mobilerobot.com/support/service-warranty/full-care/) customers. [General contact for The Mobile Robot Company](https://info.mobilerobot.com/company/locations/contact-information/) (https://info.mobilerobot.com/company/locations/contact-information/) is **hello@mobilerobot.com**.

Safety & Compliance

How J1600 safety works, safety functions, standards, and safe deployment.



Safety Overview

6 pages



Safety Functions

9 pages



Standards and Regulations

8 pages



Certificates and Declarations

4 pages



Safe Deployment

7 pages



Safety Overview

How the J1600's layered safety design works: the split between human and machine responsibilities, manual and autonomous mode behavior, certified safety components, and emergency controls.



How J1600 Safety Works

An overview of the J1600's layered safety design — certified sensors and controllers, a 360-degree protective field, operator confirmation, and immediate manual takeover.



Human Responsibilities

What the operator is responsible for when working with the J1600 — task initiation, manual pickup, judging the environment, confirming autonomous mode, and taking over.



Manual and Autonomous Mode Safety

How J1600 safety behaves in manual mode, in autonomous mode, and during the handover between them — key switch positions, confirmation, floor lights, and takeover.



Safety Architecture

The complete safety component set of the J1600 — independent safety controller, dual 2D safety LiDARs, emergency stops, certified encoders and motor controllers — and how the laye...



Navigation Sensors vs. Safety Sensors

Why the J1600 keeps two separate sensor systems — a 3D LiDAR and RGB AI camera for navigation, and two certified 2D safety LiDARs for personnel protection.



Emergency Stops and Manual Takeover

Every way to stop the J1600 or return it to manual control — three emergency-stop buttons, the belly button, tiller takeover, and the key switch.

How J1600 Safety Works

This page explains the safety design of the [J1600 self-driving pallet jack](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>) at a glance: what protects people around the vehicle, what the operator is responsible for, and where to find the details. It is written for anyone evaluating or working near the J1600.

Safety in layers

The J1600 does not rely on a single mechanism. Protection comes from several independent layers working together:

1. **Navigation and mapping.** [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>) (simultaneous localization and mapping) builds and updates a three-dimensional model of the facility so the vehicle plans routes around obstacles.
2. **Certified safety sensing.** Two separate 2D safety LiDAR scanners, mounted front and rear, provide a full 360-degree protective field around the vehicle. The field is speed-dependent and expands as travel speed increases.
3. **Independent safety control.** An independent safety controller, [safety-certified driving-speed and driving-direction encoders](https://info.mobilerobot.com/safety-compliance/safety-functions/speed-monitoring/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/speed-monitoring/>), and two safety-certified motor controllers supervise motion.
4. **Human confirmation.** A person initiates every task and must [confirm entry into automatic mode](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>) with a physical button press. The vehicle only enters autonomous mode when the operator judges the environment ready.
5. **Physical override.** Three emergency-stop buttons, a belly button for stop and reverse, and tiller-based takeover let anyone stop the vehicle or return it to manual control immediately.

The navigation stack and the safety stack are deliberately separate systems — see [Navigation sensors vs. safety sensors](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/>).

What the vehicle does

- [Detects people](https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/>) and obstacles in a 360-degree protective field that supports both forward and reverse autonomous travel.
- [Adjusts the size of its protective field with speed](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/>), expanding it at higher speeds.
- Shows its status on the floor: white light indicates manual mode, and blue light strips display the current protected area in automatic mode.
- Stops on any emergency-stop input and brakes with a [certified braking function](https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/braking/>).
- Asks the operator to confirm automatic mode and instructs the operator to step away before starting.

Each certified safety function carries an assigned Performance Level (PL) between PL b and PL d under [EN ISO 13849-1](https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/) (<https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/>). The full list is in [Performance levels](https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/>).

What the operator does

The J1600 is built for [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 operator keeps judgment-heavy work and full authority over when the machine drives itself. Pallet pickup is always manual, autonomous mode must be confirmed by a person, and grabbing or moving the tiller returns the vehicle to manual control at once. See [Human responsibilities](https://info.mobilerobot.com/safety-compliance/safety-overview/human-responsibilities/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/human-responsibilities/>), and [Emergency stops and 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/>).

Standards and certification

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/>). Its preliminary [compliance list](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/) (<https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/>) includes [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/>) (driverless industrial trucks), [EN ISO 13849-1:2023](https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/) (safety-related control systems), [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-3691-1-2015+A1-2020/) (<https://info.mobilerobot.com/safety-compliance/standards/iso-3691-1-2015+A1-2020/>).

[obilerobot.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/>), and [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/>), together with the Machinery, [EMC](#), [Radio Equipment](#), and [RoHS](#) directives and the [EU Batteries Regulation](#) (<https://info.mobilerobot.com/safety-compliance/standards/emc-red-rohs-and-battery-regulations/>). The battery is tested to [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/>) for transport.

PRELIMINARY SPECIFICATIONS

The January 2026 specifications, including the assigned Performance Levels, are preliminary and subject to change. No stopping-distance curves, validation reports, or declaration of conformity are published; use current product documentation for deployment decisions.

Where to go next

- [Human responsibilities](https://info.mobilerobot.com/safety-compliance/safety-overview/human-responsibilities/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/human-responsibilities/>) — the operator's share of safe operation.
- [Manual and autonomous mode safety](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/>) — how safety behaves in each mode and during handover.
- [Safety architecture](https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/>) — the complete list of safety components.
- [Emergency stops and 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/>) — every way to stop the vehicle.
- [Performance levels](https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/>) — each certified function and its Performance Level.

Human Responsibilities

The J1600 automates repetitive travel, not judgment. This page describes the operator's share of safe operation: the decisions and actions that stay with a person in the [human-in-the-loop](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/) design.

The division of work

Human operator	J1600
Judge load stability, pallet condition, congestion, urgency, and exceptions	Build and update a 3D map and navigate to saved points
Pick pallets and perform manual height handling up to 1.6 m	Carry up to 1,600 kg along repetitive routes
Select the destination and what happens after delivery	Avoid obstacles and apply speed-dependent safety fields
Confirm entry into autonomous mode	Drop at floor level, then return, park, continue, or wait
Override or resume manual control at any time	Repeat stored tasks consistently

Before starting an autonomous task

- **Pick up the pallet manually.** [Pallet pickup is always a manual operation](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>). Use your own judgment on pallet condition, load stability, fork placement, and approach.
- **Check the load.** The operator judges whether a pallet or open-base carrier is stable and within the supported envelope. 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.
- **Judge the environment.** The vehicle only [enters autonomous mode](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>) when the operator

judges the environment ready. Autonomous driving requires level floors — automatic gradeability is 0 percent, so dock plates and slopes remain [manual work](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>).

- **Confirm the mode change.** The robot asks for confirmation before [entering automatic 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/>). Confirm with the physical start/resume button, then step away when the interface instructs you to.

During autonomous operation

The vehicle drives itself, but a person remains in charge of [exceptions](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/) (<https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/>):

- Take over immediately by grabbing or moving the tiller, or stop the vehicle with any emergency-stop control. See [Emergency stops and 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/>).
- Reprioritize when circumstances change — for example, when a production line urgently needs material.

Situations that stay human

The design deliberately keeps the following in human hands, because context and improvisation matter:

1. Spotting damaged pallets — a broken bottom board or protruding nail — before they become a hazard or a jam.
2. Judging a [top-heavy, leaning, or poorly stacked load](https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/) (<https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/>) before lifting it.
3. Seeing and tucking away a loose shrink-wrap tail before it snags a rack or doorframe.
4. Finding a pallet that is not exactly at its recorded position.
5. Catching leaks or crushed corners before goods reach a customer or production line.
6. Handling steep dock plates, bumps, and misalignment when entering a truck or trailer.
7. Improvising a safe route through a [crowded or cluttered receiving area](https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/) (<https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/>).

8. Responding immediately to urgent reprioritization.
9. [Teaching new routes](https://info.mobilerobot.com/documentation/concepts/teach-and-rep-eat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-rep-eat/>), by driving to a point and saving it, instead of calling in an automation expert.

Responsibility is a complement, not the whole system

Human control is not the vehicle's only safety mechanism. Independent controllers, certified components, two safety LiDAR scanners, emergency stops, and a 360-degree protective field operate regardless of the operator. Human takeover complements the [safety architecture](https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/>); it does not replace it. See [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/>) for the full picture.

Manual and Autonomous Mode Safety

The J1600 is a [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) vehicle: it drives like a conventional walk-behind electric pallet jack under manual control and drives itself to saved locations in autonomous mode. This page describes how safety works in each mode and at the handover between them.

Selecting a mode

A three-position key switch selects the vehicle's state:

Key position	Meaning
Power off	Vehicle powered down
Manual	Manual tiller operation only
Automatic	Autonomous task execution permitted

Automatic/manual mode selection is a certified safety function rated PL c — see [Mode selection](https://info.mobilerobot.com/safety-compliance/safety-functions/mode-selection/)).

Manual mode

In [manual mode](https://info.mobilerobot.com/documentation/user-guides/manual-operation/), the operator controls travel and lift with the tiller, like a conventional electric pallet jack. Manual mode covers the judgment-heavy work: pallet pickup, handling up to 1.6 m, difficult approaches, [sensitive or unstable loads](https://info.mobilerobot.com/application/use-cases/sensitive-or-unstable-loads/), and [exceptions](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/).

- White light indicates that the vehicle is in manual mode.
- Tiller-position switches serve two safety roles: one acts as an emergency stop, the other enables manual control. Tiller-position detection is rated PL c — see [Tiller detection](https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/).

- Manual gradeability is 5 percent (2.86°) without load and 3 percent (1.72°) with full load; slopes and dock plates are manual-mode territory.

Handover to autonomous mode

Handover is deliberate and operator-controlled:

1. The operator creates or selects a task on the 15-inch touchscreen and chooses the saved destination and post-delivery behavior.
2. The robot asks for confirmation to enter automatic mode.
3. The operator confirms with the physical LED start/resume button.
4. The interface instructs the operator to step away.
5. The vehicle starts the autonomous task.

The vehicle only [enters autonomous mode](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>), when the operator judges the environment ready. Pallet pickup has already happened manually; autonomous delivery is at floor level.

Autonomous mode

While driving itself, the J1600:

- applies a 360-degree protective field from two 2D safety LiDAR scanners, supporting forward and reverse travel;
- [expands the protective field as speed increases](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/>), up to the top speed of 5.4 km/h (1.5 m/s);
- displays the current protected area with blue floor light strips;
- detects people in the safety field ([person detection](https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/>), PL d) and brakes with a certified [braking function](https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/braking/>) (PL d);
- [avoids obstacles](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>) using its continuously updated 3D map, separately from the certified safety sensing — see [Navigation sensors vs. safety sensors](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/>).

Autonomous mode is a level-floor application: automatic gradeability is 0 percent, the maximum traversable bump is 25 mm, and the maximum traversable gap is 20 mm.

Returning to manual control

Manual control is always immediately available:

- **Grab or move the tiller.** The vehicle returns to manual control at once.
- **Press an emergency stop.** Three emergency-stop buttons and a belly button for stop and reverse are fitted.
- **Use the key switch.** Turning to manual or power-off ends autonomous operation.

See [Emergency stops and 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/) for details, and [Human responsibilities](https://info.mobilerobot.com/safety-compliance/safety-overview/human-responsibilities/) (https://info.mobilerobot.com/safety-compliance/safety-overview/human-responsibilities/) for what remains the operator's job in both modes.

Safety Architecture

The J1600's safety architecture layers navigation, sensing, safety control, certified actuation, human confirmation, and physical override. This page lists every safety component and explains how the layers combine. For the high-level introduction, see [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, mounted front and rear on the chassis
- Three emergency-stop buttons
- 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
- Safety-certified driving-direction encoder
- Two safety-certified motor controllers

The 360-degree protective field

The two 2D safety LiDAR scanners together cover the full perimeter of the vehicle, producing a 360-degree protective field that supports both forward and reverse autonomous travel — including certified safe reversing without specially marked target zones. The field is speed-dependent: it changes with travel speed and expands at higher speeds. Field-size adjustment is itself a certified safety function rated PL d — see [Safety-field adjustment](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/>).

Blue floor light strips — three in total — display the current safety zone so people nearby can see the protected area. White light indicates manual mode.

Certified motion control

Motion is supervised by the independent safety controller working with a safety-certified driving-speed encoder, a safety-certified driving-direction encoder, and two safety-certified motor controllers. These support the certified [braking](https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) (PL d) and [speed monitoring and control](https://info.mobilerobot.com/safety-compliance/safety-functions/speed-monitoring/) (PL c) functions.

Human confirmation and override

Two layers involve people directly:

- **Confirmation.** The operator must confirm entry into automatic mode with the physical start/resume button, and the robot instructs the operator to step away before starting. See [Manual and autonomous mode safety](https://info.mobilerobot.com/safety-compliance/safety-overview/manual-and-autonomous-mode-safety/).
- **Override.** Grabbing or moving the tiller enables immediate manual takeover; emergency stops halt the vehicle. See [Emergency stops and manual takeover](https://info.mobilerobot.com/safety-compliance/safety-overview/emergency-stops-and-manual-takeover/).

Separation from the navigation stack

The 3D navigation LiDAR and RGB AI camera map the environment and route the vehicle around objects; the 2D safety stack supplies the certified personnel protection. The two systems are independent — see [Navigation sensors vs. safety sensors](https://info.mobilerobot.com/safety-compliance/safety-overview/navigation-sensors-vs-safety-sensors/).

Performance levels

Each certified safety function carries an assigned Performance Level between PL b and PL d — for example braking, emergency stop, [person detection](https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/), and safety-field adjustment at PL d. The full table is in [Performance levels](https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/).

What this architecture delivers — and its documentation limits

The layered design improves predictability and may [reduce workplace accidents](https://info.mobilerobot.com/applications/results/safety-improvements/) compared with manual pallet handling.

DEPLOYMENT DECISIONS NEED CURRENT DOCUMENTATION

No accident-rate test data, safety-distance curves, stopping distances, validation reports, or [declaration of conformity](https://info.mobilerobot.com/safety-compliance/certificates/ce-declaration-of-conformity/) are published on this site. The January 2026 specifications are preliminary and subject to change; use current product documentation for deployment decisions.

Navigation Sensors vs. Safety Sensors

The J1600 carries two distinct sensor systems that are easy to confuse: the navigation stack that drives the vehicle, and the safety stack that protects people. This page explains what each does and why they are separate.

Two stacks at a glance

	Navigation stack	Safety stack
Sensors	3D LiDAR, RGB AI camera	Two 2D safety LiDAR scanners, front and rear
Processing	Industrial NVIDIA Jetson AI computer	Independent safety controller
Job	Mapping, localization, route planning, obstacle avoidance	Certified person detection and protective fields
Certification role	Control/navigation function	Certified safety functions with assigned Performance Levels

The navigation stack

The 3D LiDAR performs [SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (simultaneous localization and mapping): it builds and continuously updates a three-dimensional map of the facility while an operator drives, then localizes the vehicle and plans routes to saved destinations. It scans environmental structures at heights reaching up to 70 m above the vehicle, works without fixed tracks, wires, reflectors, or building modifications, and routes around obstacles in dynamic environments. An RGB AI camera is part of the same control stack, and preferred travel zones can be defined for safer routing through production areas.

3D mapping is designed for greater precision and reliability than traditional 2D navigation in complex or changing environments — one reason the vehicle suits [brownfield sites](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/).

For exact sensor geometry, range, accuracy, minimum aisle width, and localization tolerances, contact the company or a partner.

The safety stack

Personnel protection does not depend on the navigation system. Two separate 2D safety LiDAR scanners feed an independent safety controller and certified components. Together they produce a full 360-degree protective field that supports forward and reverse autonomous travel, changes size with speed, and triggers certified reactions:

- [Person detection in the safety field](https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) (https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) — PL d
- [Safety-field size adjustment](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) (https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) — PL d
- [Braking](https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) (https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) — PL d
- [Speed monitoring and control](https://info.mobilerobot.com/safety-compliance/safety-functions/speed-monitoring/) (https://info.mobilerobot.com/safety-compliance/safety-functions/speed-monitoring/) — PL c

Why the separation matters

Obstacle avoidance by the navigation stack is a productivity feature: it keeps the vehicle moving efficiently around whatever is in the way. The 2D safety stack is the certified protection layer: it guarantees [the response when a person enters the protective field](https://info.mobilerobot.com/support/troubleshooting/obstacle-or-safety-field-stops/) (https://info.mobilerobot.com/support/troubleshooting/obstacle-or-safety-field-stops/), independently of what the navigation software decides. Keeping the two systems separate means personnel protection rests on certified components rather than on the AI navigation stack.

For the complete component list, see [Safety architecture](https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) (https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/). For terms such as LiDAR, SLAM, and Performance Level, see the [glossary](https://info.mobilerobot.com/documentation/concepts/glossary/) (https://info.mobilerobot.com/documentation/concepts/glossary/).

Emergency Stops and Manual Takeover

Anyone working near a J1600 can stop it, and the operator can reclaim manual control at any moment. This page lists every stop and takeover control and what each does.

Emergency-stop buttons

The J1600 has three emergency-stop buttons. The emergency-stop function is rated [Performance Level d \(PL d\)](https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/>), the highest level assigned to any J1600 safety function. The emergency stop is one of the [externally visible controls](https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/interface-specifications/>) on the vehicle, alongside the start/resume button, key switch, and tiller.

Belly button

A belly button provides stop and reverse. It protects the person at the tiller position: activating it stops the vehicle and reverses it away.

Tiller takeover

The tiller is both the manual control and a safety device:

- **Grab or move the tiller** during autonomous operation and the vehicle immediately returns to manual control.
- Two tiller-position switches back this up: one functions as an emergency stop, the other enables manual control. Tiller-position detection is a certified safety function rated PL c — see [Tiller detection](https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/>).

Takeover requires no menu, code, or supervisor: the [design principle](https://info.mobilerobot.com/company/about/our-approach-to-automation/) (<https://info.mobilerobot.com/company/about/our-approach-to-automation/>) is that immediate human intervention is always available. See [Human responsibilities](https://info.mobilerobot.com/safety-compliance/safety-overview/human-responsibilities/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/human-responsibilities/>).

Key switch

The three-position key switch selects power off, manual-only, or automatic mode. Turning it out of the automatic position ends autonomous operation. Mode selection is a certified safety function rated PL c — see [Mode selection](https://info.mobilerobot.com/safety-compliance/safety-functions/mode-selection/) (https://info.mobilerobot.com/safety-compliance/safety-functions/mode-selection/).

Start and resume

Autonomous execution is controlled by a physical LED start/resume button. The vehicle **does not enter automatic mode on a touchscreen tap alone** (https://info.mobilerobot.com/support/troubleshooting/robot-will-not-enter-autonomous-mode/) — the operator must confirm with this button, and the interface instructs the operator to step away before the task starts. See [Manual and autonomous mode safety](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/).

Automatic protection alongside manual controls

Manual stops complement, rather than replace, the automatic protection layers: certified [person detection](https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) (https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) (PL d) and [braking](https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) (https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) (PL d) act on the 360-degree protective field regardless of operator input. The full component list is in [Safety architecture](https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) (https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/).

Safety Functions

The individual certified safety functions of the J1600 — braking, speed monitoring, safety-field adjustment, person detection, and more — with their assigned Performance Levels.



Braking

The J1600's certified braking system, rated Performance Level d, and the safety-certified motion components that support it.



Speed Monitoring

The J1600's certified speed monitoring and control function, rated Performance Level c, built on safety-certified speed and direction encoders.



Safety-Field Adjustment

How the J1600 adjusts its 360-degree protective field with speed — a certified safety function rated Performance Level d — and how blue floor lights display the active zone.



Person Detection

How the J1600 detects people in its 360-degree safety field using two certified 2D safety LiDAR scanners — a safety function rated Performance Level d.



Load Detection

The J1600's load-detection safety function, rated Performance Level b, and the load limits and operator judgment it works alongside.



Mode Selection

The J1600's certified automatic/manual mode-selection function, rated Performance Level c — the key switch, confirmation button, and step-away sequence.



Tiller Detection

The J1600's certified tiller-position detection function, rated Performance Level c — how the tiller acts as emergency stop, manual-control enable, and instant takeover.



Charging Safety

Safety in J1600 charging — the certified charging-current relay rated Performance Level b, the LiFePO4 battery, UN 38.3 transport testing, and safe manual and automatic charging.



Performance Levels

The complete table of Performance Levels (PL) assigned to the J1600's nine certified safety functions under EN ISO 13849-1, from PL b to PL d.

Braking

The braking system is one of the J1600's certified safety functions. It is rated **Performance Level d (PL d)** (<https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/>) — the highest level assigned to any J1600 safety function.

Role in the safety architecture

Braking is the reaction layer of the [safety architecture](https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/>): when a safety function demands a stop — [a person detected in the protective field](https://info.mobilerobot.com/support/troubleshooting/obstacle-or-safety-field-stops/) (<https://info.mobilerobot.com/support/troubleshooting/obstacle-or-safety-field-stops/>), an emergency-stop input, or a takeover — the certified braking system halts the vehicle. It works together with:

- the independent safety controller;
- the safety-certified driving-speed encoder and driving-direction encoder;
- the two safety-certified motor controllers;
- [speed monitoring and control](https://info.mobilerobot.com/safety-compliance/safety-functions/speed-monitoring/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/speed-monitoring/>) (PL c), which supervises how fast the vehicle is allowed to travel.

The 360-degree protective field supports both forward and reverse autonomous travel, so certified stopping applies in both travel directions. The vehicle's top speed is 5.4 km/h (1.5 m/s), and the protective field expands at higher speeds to preserve reaction margin — see [Safety-field adjustment](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/>).

Triggers

- [Person detection](https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/>) in the 360-degree safety field (PL d).
- Any of the three emergency-stop buttons (PL d) or the [tiller-position emergency-stop switch](https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/>).
- The belly button, which stops and reverses the vehicle.

See [Emergency stops and 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/) for the full set of stop controls.

i PRELIMINARY SPECIFICATION

The January 2026 Performance Levels are preliminary and subject to change. This page does not give stopping distances or safety-distance curves; base deployment decisions on the current product documentation.

Speed Monitoring

Speed monitoring and control is a certified J1600 safety function rated **Performance Level c (PL c)**. It supervises how fast the vehicle travels and feeds the speed-dependent behavior of the other safety functions.

How it is built

The function rests on dedicated certified hardware in the [safety architecture](https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) (https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/):

- a safety-certified driving-speed encoder;
- a safety-certified driving-direction encoder;
- an independent safety controller;
- two safety-certified motor controllers.

Because the direction encoder is part of the certified chain, supervision covers both forward and reverse travel — the J1600's 360-degree protective field supports autonomous driving in both directions.

Why speed is safety-relevant

The J1600's top speed is 5.4 km/h (1.5 m/s / 3.4 mph). Its protective field is speed-dependent: the field changes with travel speed and expands at higher speeds, so the vehicle always monitors a zone matched to its current motion. Reliable speed measurement is what makes that adjustment trustworthy — see [Safety-field adjustment](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) (https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) (PL d).

Speed monitoring also underpins the certified [braking](https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) (https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) function (PL d), which stops the vehicle when a person enters the field or an emergency stop is triggered.

Related pages

- [Safety-field adjustment](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) (https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) — how field size follows speed.
- [Person detection](https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) (https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) — what happens when someone enters the field.
- [Performance levels](https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) (https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) — all assigned levels in one table.

PRELIMINARY SPECIFICATION

Performance Levels come from the preliminary January 2026 product documentation and are subject to change.

Safety-Field Adjustment

Safety-field size adjustment is a certified J1600 safety function rated **Performance Level d (PL d)**. It matches the size of the protective field to the vehicle's current speed.

The 360-degree protective field

Two 2D safety LiDAR scanners, mounted front and rear on the chassis, together cover the vehicle's full perimeter. The resulting 360-degree protective field supports autonomous travel in both forward and reverse — including certified safe reversing without specially marked target zones.

Speed-dependent sizing

The protective field is not static:

- the field changes with travel speed;
- it expands as speed increases, up to the top speed of 5.4 km/h (1.5 m/s);
- certified [speed monitoring](https://info.mobilerobot.com/safety-compliance/safety-functions/speed-monitoring/) (https://info.mobilerobot.com/safety-compliance/safety-functions/speed-monitoring/) (PL c), built on safety-certified speed and direction encoders, supplies the speed signal.

A faster vehicle needs more room to react, so the monitored zone grows with speed. When a person enters the active field, certified [person detection](https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) (https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) (PL d) and [braking](https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) (https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) (PL d) respond.

Visible status on the floor

People near the vehicle can see what is protected:

- three blue light strips display the current safety zone in automatic mode;
- white light indicates manual mode;
- floor-indicator lights signal automatic operation.

Related pages

- [Navigation sensors vs. safety sensors](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/) — why the 2D safety LiDARs are separate from the 3D navigation LiDAR.
- [Safety architecture](https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) (https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) — the complete certified component list.
- [Performance levels](https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) (https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) — all assigned levels in one table.

PRELIMINARY SPECIFICATION

Performance Levels are preliminary (January 2026) and subject to change. Exact field geometries and safety-distance curves are not available.

Person Detection

Person detection in the safety field is a certified J1600 safety function rated **Performance Level d (PL d)** (<https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/>) — the highest level assigned to any J1600 safety function.

How it works

Two 2D safety LiDAR scanners, mounted front and rear on the chassis, monitor a 360-degree protective field around the vehicle. The field covers forward and reverse autonomous travel and is speed-dependent: it expands as the vehicle drives faster, so detection distance grows with speed. See [Safety-field adjustment](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/>).

Detection feeds an independent safety controller, and the certified [braking](https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/braking/>) function (PL d) provides the [stopping reaction](https://info.mobilerobot.com/support/troubleshooting/obstacle-or-safety-field-stops/) (<https://info.mobilerobot.com/support/troubleshooting/obstacle-or-safety-field-stops/>). This chain is built from [certified safety components](https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/>) and runs separately from the 3D navigation system.

Detection vs. obstacle avoidance

The J1600 also [avoids obstacles](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>) using its 3D LiDAR map and RGB AI camera — but that is a navigation capability, not the certified protection layer. Person detection belongs to the independent 2D safety stack, so personnel protection does not depend on the AI navigation software. The distinction is explained in [Navigation sensors vs. safety sensors](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/>).

What bystanders see

Three blue floor light strips display the currently protected area during automatic operation, so people nearby can see the active safety zone. White light indicates

manual mode.

Operator's part

Before autonomous operation starts, the robot instructs the operator to step away — person detection protects people who end up in the vehicle's path, but the design keeps people clear of the field from the start. See [Human responsibilities](https://info.mobilerobot.com/safety-compliance/safety-overview/human-responsibilities/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/human-responsibilities/>).

PRELIMINARY SPECIFICATION

Performance Levels are preliminary January 2026 specifications and are subject to change. For detection ranges, field geometries, and stopping distances, use current product documentation for deployment decisions.

Load Detection

Load detection is a certified J1600 safety function rated **Performance Level b (PL b)**. A dedicated load-detection sensor is part of the vehicle's [safety architecture](https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/>).

What the vehicle senses

The load-detection sensor lets the vehicle register whether it is carrying a load. Load state matters to safe operation: the J1600's rated payload is 1,600 kg (about 3,500 lb), and [performance figures](https://info.mobilerobot.com/products/j1600/dimensions-and-performance/) (<https://info.mobilerobot.com/products/j1600/dimensions-and-performance/>) differ between loaded and unloaded travel — for example, fork lifting speed is 0.10 m/s without load and 0.08 m/s at full load. A lifting-height sensor is also fitted as part of the control system.

The limits load detection works within

Load detection is a sensor function, not a substitute for load limits or judgment:

Limit	Value
Rated payload	1,600 kg / about 3,500 lb
Maximum pallet or load length, including overhang	1,250 mm / 49 in
Maximum pallet or load width, including overhang	1,250 mm / 49 in
Maximum load height from floor	1,700 mm / 67 in
Carrier type	Open-base, forkable, no bottom deck board

The operator's part

Judging load stability stays with the operator: pallet condition, stacking, top-heaviness, and whether a carrier is suitable at all. Pallet pickup is always manual, and no [blanket approval](https://info.mobilerobot.com/safety-compliance/safe-deployment/approved-loads-and-pallets/) exists for every carrier or for hazardous materials. See [Human responsibilities](https://info.mobilerobot.com/safety-compliance/safety-overview/human-responsibilities/).

Related pages

- [Performance levels](https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) — all assigned levels in one table.
- [Technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) — full load and dimension data.

PRELIMINARY SPECIFICATION

Performance Levels come from the preliminary January 2026 product documentation and are subject to change.

Mode Selection

Automatic/manual mode selection is a certified J1600 safety function rated **Performance Level c (PL c)** (<https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/>). It guarantees that the vehicle is always in a deliberately chosen state: powered off, manual, or automatic.

The key switch

A three-position key switch selects:

Position	State
Power off	Vehicle powered down
Manual	Manual tiller operation only
Automatic	Autonomous task execution permitted

Entering automatic mode

Turning the key to automatic is not enough on its own. The sequence requires **deliberate operator action at every step** (<https://info.mobilerobot.com/safety-compliance/safe-deployment/operator-responsibilities/>):

1. The operator creates or selects a task on the touchscreen.
2. The robot asks for confirmation to enter automatic mode.
3. The operator confirms with the physical LED start/resume button.
4. The interface instructs the operator to step away.
5. The vehicle **begins autonomous operation** (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>).

The operator only confirms when the environment is ready — **this judgment stays human** (<https://info.mobilerobot.com/safety-compliance/safety-overview/human-responsibilities/>). See **Manual and autonomous mode safety** (<https://info.mobilerobot.com/safety-compliance/safety-overview/manual-and-autonomous-mode-safety/>).

Leaving automatic mode

Automatic mode ends immediately when:

- the operator grabs or moves the tiller ([tiller detection](https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/) (https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/), PL c);
- an emergency-stop control is used;
- the key switch is turned to manual or power off.

See [Emergency stops and 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/).

Mode visibility

White light indicates manual mode; blue floor light strips display the protected area during automatic operation, and floor-indicator lights signal automatic mode to people nearby.

PRELIMINARY SPECIFICATION

Performance Levels come from the preliminary January 2026 product documentation and are subject to change.

Tiller Detection

Tiller-position detection is a certified J1600 safety function rated **Performance Level c (PL c)**. The tiller — the handle familiar from any walk-behind electric pallet jack — doubles as a safety device.

Two tiller-position switches

The [safety architecture](https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/>), includes two dedicated tiller-position switches:

- **Emergency-stop switch.** One tiller position acts as an emergency stop.
- **Manual-control switch.** Another tiller position enables manual control.

Certified detection of the tiller's position is what makes both behaviors reliable.

Instant takeover

During autonomous operation, grabbing or moving the tiller returns the vehicle to manual control immediately. There is no menu, code, or delay — immediate human intervention is central to the [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>) concept. Tiller takeover works alongside the three emergency-stop buttons and the belly button; the full set of stop controls is listed in [Emergency stops and 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 familiar tool by design

One of the product's [design principles](https://info.mobilerobot.com/company/about/our-approach-to-automation/) (<https://info.mobilerobot.com/company/about/our-approach-to-automation/>) is that the tiller and manual behavior should feel like a conventional electric pallet jack, so an experienced operator needs only about 30 minutes of training. The [safety design](https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/>) builds on that familiarity: the natural reaction of reaching for the handle is also the takeover mechanism.

Related pages

- [Mode selection](https://info.mobilerobot.com/safety-compliance/safety-functions/mode-selection/) (https://info.mobilerobot.com/safety-compliance/safety-functions/mode-selection/) — the key switch and confirmation sequence (PL c).
- [Manual and autonomous mode safety](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/) — safety behavior in each mode.
- [Performance levels](https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) (https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) — all assigned levels in one table.

PRELIMINARY SPECIFICATION

The assigned Performance Levels are preliminary January 2026 specifications and subject to change.

Charging Safety

Charging the J1600 is covered by a certified safety function: the **charging-current relay**, rated **Performance Level b (PL b)**. This page collects the safety-relevant facts about the battery and both charging methods.

The battery

Parameter	Value
Battery	24 V, 200 Ah
Chemistry	Lithium iron phosphate (LiFePO4)
Charging rate	About 47 percentage points per hour
Transport testing	UN Manual of Tests and Criteria, subsection 38.3 (UN 38.3)
Regulatory coverage	Regulation (EU) 2023/1542 — Batteries Regulation

[LiFePO4 chemistry](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/>) is part of the vehicle's industrial-use design, alongside its certified safety architecture. The battery is tested to [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/>), the standard transport-safety test series for lithium batteries.

Charging-current relay

The charging-current relay is one of the nine certified safety functions on the [Performance levels](https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/>) table. It governs the charging current path between charger and vehicle.

Manual charging

Manual charging works like charging a conventional electric pallet jack: plug in the charger during a break or when the machine is idle.

Automatic charging

With the optional automatic charger, the robot drives to the station, positions itself at the charger, and a charging interface extends to the vehicle's charging plates — no human contact with the connection is needed. This supports [opportunity charging](https://info.mobilerobot.com/applications/scenarios/automatic-charging/) (<https://info.mobilerobot.com/applications/scenarios/automatic-charging/>) while the robot is not busy. Automatic charging is an advanced automation capability; when purchased, its setup is part of installation Day 1.

Related pages

- [Safety architecture](https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/>) — where the charging-current relay sits among the certified components.
- [Performance levels](https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/>) — all assigned levels in one table.
- [Technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>) — full battery and power data.

PRELIMINARY SPECIFICATION

Performance Levels come from the preliminary January 2026 product documentation and are subject to change.

Performance Levels

A **Performance Level (PL)** describes the reliability of a safety function in a machine's control system, defined by [EN ISO 13849-1](https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/) (<https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/>). Levels run from PL a (lowest) to PL e (highest). The J1600's certified safety functions are assigned levels from PL b to PL d.

Assigned levels

Safety function	Performance Level	Details
Braking system	PL d	Braking (https://info.mobilerobot.com/safety-compliance/safety-functions/braking/)
Emergency-stop button	PL d	Emergency stops and manual takeover (https://info.mobilerobot.com/safety-compliance/safety-overview/emergency-stops-and-manual-takeover/)
Person detection in safety field	PL d	Person detection (https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/)
Safety-field size adjustment	PL d	Safety-field adjustment (https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/)
Speed monitoring and control	PL c	Speed monitoring (https://info.mobilerobot.com/safety-compliance/safety-functions/speed-monitoring/)
Automatic/manual mode selection	PL c	Mode selection (https://info.mobilerobot.com/safety-compliance/safety-functions/mode-selection/)
Tiller-position detection	PL c	Tiller detection (https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/)
Load detection	PL b	Load detection (https://info.mobilerobot.com/safety-compliance/safety-functions/load-detection/)
Charging-current relay	PL b	Charging safety (https://info.mobilerobot.com/safety-compliance/safety-functions/charging-safety/)

Reading the table correctly

- The levels apply to **individual safety functions** within the [safety architecture](https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/>) — they are not a statement that every subsystem shares the same PL.
- The highest-rated functions (PL d) are those protecting people directly: braking, emergency stop, person detection, and safety-field adjustment.

- EN ISO 13849-1:2023 appears in the J1600's preliminary [compliance list](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/) (<https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/>) together with [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/>), the standard for driverless industrial trucks. See [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/>) for the full standards context.

PRELIMINARY SPECIFICATION

These Performance Levels come from the preliminary January 2026 product documentation and are subject to change. No [certificates](https://info.mobilerobot.com/safety-compliance/certificates/) (<https://info.mobilerobot.com/safety-compliance/certificates/>), test reports, declaration numbers, or notified-body information are published here; use current product documentation for deployment decisions.

Standards and Regulations

The directives, regulations, and ISO and ANSI standards in the J1600's compliance list, and what each one covers.



ISO 3691-4

What EN ISO 3691-4 covers, why it is the central safety standard for driverless industrial trucks, and how it applies to the J1600's autonomous mode.



ISO 13849-1

What EN ISO 13849-1 covers, how Performance Levels (PL) work, and the levels assigned to the J1600's nine safety functions.



ISO 12100

What EN ISO 12100 covers, the three-step risk-reduction method it defines, and its role in the J1600's design and site deployment.



ISO 3691-1

What EN ISO 3691-1 covers for self-propelled industrial trucks and why it applies to the J1600's manual, walk-behind operating mode.



ANSI/ITSDF B56.5

What ANSI/ITSDF B56.5 covers for driverless industrial vehicles in the United States and how it applies to the J1600's autonomous mode.



ANSI/ITSDF B56.1

What ANSI/ITSDF B56.1 covers for operator-controlled low lift and high lift trucks and how it applies to the J1600's manual mode.



EU Machinery Requirements

How the EU Machinery Directive 2006/42/EC applies to the J1600, what CE marking means, and which harmonized standards support conformity.



EMC, RED, RoHS and Battery Regulations

The EU directives and regulation in the J1600's compliance list beyond machinery safety — electromagnetic compatibility, radio equipment, hazardous substances, and batteries.

ISO 3691-4

EN ISO 3691-4:2023 is the central European safety standard for driverless industrial trucks and appears in the J1600's [compliance list](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/) (<https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/>). This page explains what the standard covers and how it relates to the J1600.

What the standard covers

ISO 3691-4, *Industrial trucks — Safety requirements and verification — Part 4: Driverless industrial trucks and their systems*, sets safety requirements for industrial trucks that travel without an onboard or accompanying driver. It addresses, among other things:

- detection of persons in the truck's path and the protective devices used for it;
- [speed control](https://info.mobilerobot.com/safety-compliance/safety-functions/speed-monitoring/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/speed-monitoring/>), and braking in automatic operation;
- behaviour in operating zones shared with pedestrians;
- load handling and stability during automatic travel;
- warning devices and mode indication;
- verification of the safety requirements.

The EN edition is harmonized under the [EU machinery requirements](https://info.mobilerobot.com/safety-compliance/standards/eu-machinery-requirements/) (<https://info.mobilerobot.com/safety-compliance/standards/eu-machinery-requirements/>), so conformity with it supports the presumption of conformity with the Machinery Directive's essential health and safety requirements.

How it applies to the J1600

In autonomous mode the J1600 operates as a driverless industrial truck, and its compliance list includes EN ISO 3691-4:2023. The company summarizes its position as compliance with EU and US safety requirements, especially ISO 3691-4 and [ANSI/ITSDF B56.5](https://info.mobilerobot.com/safety-compliance/standards/ansi-itsdf-b56-5/) (<https://info.mobilerobot.com/safety-compliance/standards/ansi-itsdf-b56-5/>).

The requirements of the standard map directly onto the J1600's protective measures:

- a 360-degree protective field built on two 2D safety LiDAR scanners;
- [speed-dependent safety fields](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) that expand as travel speed increases;
- [person detection](https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) and [braking](https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) functions with assigned Performance Levels (see [ISO 13849-1](https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/));
- blue floor-light strips that display the current protected area;
- [operator confirmation before the vehicle enters automatic mode](https://info.mobilerobot.com/safety-compliance/safety-overview/manual-and-autonomous-mode-safety/).

How these elements work together is described in [How J1600 safety works](https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/) and the [safety architecture](https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/).

Dual mode and the companion standard

ISO 3691-4 addresses driverless operation. The J1600 is a [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) vehicle, so its manual, walk-behind operation falls under the companion standard [ISO 3691-1](https://info.mobilerobot.com/safety-compliance/standards/iso-3691-1/). Both parts appear in the compliance list.

PRELIMINARY COMPLIANCE LIST

The J1600's compliance list comes from the preliminary January 2026 product documentation and is subject to change. No [certificates](https://info.mobilerobot.com/safety-compliance/certificates/), test reports, declaration numbers, or notified-body information are published here; use current product documentation for deployment decisions.

ISO 13849-1

EN ISO 13849-1:2023 is the machinery standard behind the Performance Levels (PL) assigned to the J1600's safety functions. It appears in the J1600's [compliance list](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/) (<https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/>).

What the standard covers

ISO 13849-1, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design*, defines how the parts of a control system that perform safety functions must be designed and evaluated. Its core concept is the **Performance Level**: a measure of how reliably a safety function can be expected to perform, running from PL a (lowest) to PL e (highest). The required level for each function follows from the severity of possible injury, the frequency of exposure, and the possibility of avoiding the hazard.

How it applies to the J1600

The J1600's product documentation assigns Performance Levels to nine safety functions:

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

The functions that protect people directly — [braking](https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/braking/>), emergency stop, [person detection](https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/>), and [safety-field adjustment](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/>) — carry the highest assigned level, PL d. Each function is described in detail under [Performance Levels](https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/>) and the surrounding safety-function pages.

The levels apply to individual safety functions within the [safety architecture](https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/>); they are not a statement that every subsystem shares the same PL.

Relationship to other standards

ISO 13849-1 defines *how reliable* a safety function must be; product standards such as [ISO 3691-4](https://info.mobilerobot.com/safety-compliance/standards/iso-3691-4/) (<https://info.mobilerobot.com/safety-compliance/standards/iso-3691-4/>) define *which* safety functions a driverless industrial truck needs. The risk assessment that connects hazards to required Performance Levels follows the method of [ISO 12100](https://info.mobilerobot.com/safety-compliance/standards/iso-12100/) (<https://info.mobilerobot.com/safety-compliance/standards/iso-12100/>).

PRELIMINARY COMPLIANCE LIST

The Performance Levels above come from the preliminary January 2026 product documentation and are subject to change. No [certificates](https://info.mobilerobot.com/safety-compliance/certificates/) (<https://info.mobilerobot.com/safety-compliance/certificates/>) or test reports are published here; use current product documentation for deployment decisions.

ISO 12100

EN ISO 12100:2010 is the foundational machinery-safety standard in the J1600's [compliance list](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/) (<https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/>). It defines the risk-assessment and risk-reduction method on which the other safety standards build.

What the standard covers

ISO 12100, *Safety of machinery — General principles for design — Risk assessment and risk reduction*, describes how a machine designer identifies hazards, estimates and evaluates risks, and reduces them. Its three-step method, applied in order, is:

1. **Inherently safe design** — remove the hazard or reduce it by design choices.
2. **Safeguarding and protective measures** — guard against risks that cannot be designed out.
3. **Information for use** — warn about and document residual risks that remain after the first two steps.

How it applies to the J1600

The J1600's [layered protection](https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/>), follows this logic. Design measures such as operator-confirmed mode changes and floor-level autonomous delivery are complemented by safeguarding — the 360-degree protective field, two 2D safety LiDAR scanners, emergency stops, and safety functions with assigned Performance Levels under [ISO 13849-1](https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/) (<https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/>) — and by documented operating limits and [residual risks](https://info.mobilerobot.com/safety-compliance/safe-deployment/residual-risks/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/residual-risks/>).

The same method reappears at deployment: the pre-installation phase of the commissioning package includes a risk assessment of the customer site and the selected tasks and loads. See [Site risk assessment](https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/>) and [Commissioning and validation](https://info.mobilerobot.com/safety-compliance/safe-deployment/commissioning-and-validation/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/commissioning-and-validation/>).

Relationship to other standards

ISO 12100 supplies the general method; the product-specific requirements for the J1600's two operating modes come from [ISO 3691-4](https://info.mobilerobot.com/safety-compliance/standards/iso-3691-4/) (driverless operation) and [ISO 3691-1](https://info.mobilerobot.com/safety-compliance/standards/iso-3691-1/) (manual operation). All three are harmonized under the [EU machinery requirements](https://info.mobilerobot.com/safety-compliance/standards/eu-machinery-requirements/).

PRELIMINARY COMPLIANCE LIST

The J1600's compliance list comes from the preliminary January 2026 product documentation and is subject to change. Use current product documentation for deployment decisions.

ISO 3691-1

EN ISO 3691-1:2015+A1:2020 appears in the J1600's [compliance list](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/) (<https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/>). It is the safety standard for self-propelled industrial trucks operated by a person — the standard that covers the J1600 when it is used manually.

What the standard covers

ISO 3691-1, *Industrial trucks — Safety requirements and verification — Part 1: Self-propelled industrial trucks, other than driverless trucks, variable-reach trucks and burden-carrier trucks*, sets safety requirements for powered industrial trucks under operator control, including pedestrian-controlled (walk-behind) trucks such as electric pallet trucks. It addresses truck construction, controls, [braking](https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/braking/>), stability, load handling, and the verification of these requirements.

How it applies to the J1600

In manual mode the J1600 handles like a conventional walk-behind electric pallet jack: the operator controls travel and lift with the tiller, picks and drops pallets at up to 1,600 mm, and manoeuvres in situations that need judgment. That mode of operation is the domain of ISO 3691-1.

Because the J1600 is a [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>), vehicle, both parts of the standard family apply:

Operating mode	Applicable standard
Manual (tiller-controlled)	ISO 3691-1 (https://info.mobilerobot.com/safety-compliance/standards/iso-3691-1/) — self-propelled industrial trucks
Autonomous (driverless)	ISO 3691-4 (https://info.mobilerobot.com/safety-compliance/standards/iso-3691-4/) — driverless industrial trucks and their systems

The [transition between the two modes](https://info.mobilerobot.com/documentation/getting-started/manual-and-autonomous-modes/) (<https://info.mobilerobot.com/documentation/getting-started/manual-and-autonomous-modes/>) is itself safeguarded: [automatic/manual mode](#)

[selection](https://info.mobilerobot.com/safety-compliance/safety-functions/mode-selection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/mode-selection/>) and [tiller-position detection](https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/>), are safety functions with assigned Performance Levels under [ISO 13849-1](https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/) (<https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/>), and the operator must confirm entry into automatic mode.

The US counterpart for operator-controlled trucks is [ANSI/ITSDF B56.1](https://info.mobilerobot.com/safety-compliance/standards/ansi-itsdf-b56-1/) (<https://info.mobilerobot.com/safety-compliance/standards/ansi-itsdf-b56-1/>).

PRELIMINARY COMPLIANCE LIST

The J1600's compliance list comes from the preliminary January 2026 product documentation and is subject to change. Use current product documentation for deployment decisions.

ANSI/ITSDF B56.5

ANSI/ITSDF B56.5-2024 appears in the J1600's [compliance list](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/) (<https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/>). It is the United States safety standard for driverless industrial vehicles — the American counterpart to [ISO 3691-4](https://info.mobilerobot.com/safety-compliance/standards/iso-3691-4/) (<https://info.mobilerobot.com/safety-compliance/standards/iso-3691-4/>).

What the standard covers

ANSI/ITSDF B56.5, *Safety Standard for Driverless, Automatic Guided Industrial Vehicles and Automated Functions of Manned Industrial Vehicles*, is maintained by the Industrial Truck Standards Development Foundation (ITSDF) and accredited by the American National Standards Institute (ANSI). It sets safety requirements for vehicles that operate without a driver, covering areas such as object and personnel detection, braking, speed control, warning indication, and the responsibilities of manufacturers and users.

The 2024 edition is the version named in the J1600's compliance list.

How it applies to the J1600

In autonomous mode the J1600 operates as a driverless industrial vehicle, so B56.5 is the reference standard for its automatic operation in the US market. The company summarizes its compliance position as meeting EU and US safety requirements, especially ISO 3691-4 and ANSI/ITSDF B56.5.

The protective measures that address these requirements are the same layered system described 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/>): a 360-degree protective field from two 2D safety LiDAR scanners, [speed-dependent field adjustment](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/>), [person detection](https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/>) and [braking](https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/braking/>) with assigned Performance Levels, emergency stops, and operator-confirmed entry into automatic mode.

For the J1600's manual mode, the corresponding US standard is [ANSI/ITSDF B56.1](https://info.mobilerobot.com/safety-compliance/standards/ansi-itsdf-b56-1/) (<https://info.mobilerobot.com/safety-compliance/standards/ansi-itsdf-b56-1/>).

PRELIMINARY COMPLIANCE LIST

The J1600's compliance list comes from the preliminary January 2026 product documentation and is subject to change. No [certificates](https://info.mobilerobot.com/safety-compliance/certificates/) (<https://info.mobilerobot.com/safety-compliance/certificates/>), test reports, or country-specific approvals are published here; use current product documentation for deployment decisions.

ANSI/ITSDF B56.1

ANSI/ITSDF B56.1-2020 appears in the J1600's [compliance list](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/) (<https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/>). It is the United States safety standard for operator-controlled powered industrial trucks — the standard that covers the J1600 when a person drives it manually.

What the standard covers

ANSI/ITSDF B56.1, *Safety Standard for Low Lift and High Lift Trucks*, is maintained by the Industrial Truck Standards Development Foundation (ITSDF) and accredited by the American National Standards Institute (ANSI). It sets safety requirements for powered industrial trucks under operator control, including walk-behind (pedestrian-controlled) trucks, and addresses both manufacturer obligations (design, construction, controls, [braking](https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/braking/>), stability) and user obligations (operation, maintenance, operator training).

The 2020 edition is the version named in the J1600's compliance list.

How it applies to the J1600

In manual mode the J1600 is a walk-behind electric pallet jack: the operator steers with the tiller and can pick and drop pallets at up to 1,600 mm. As a low lift truck under operator control, that use falls within the scope of B56.1.

The division of standards mirrors the vehicle's [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>):

Operating mode	US standard	European standard
Manual (tiller-controlled)	ANSI/ITSDF B56.1-2020	EN ISO 3691-1 (https://info.mobilerobot.com/safety-compliance/standards/iso-3691-1/)
Autonomous (driverless)	ANSI/ITSDF B56.5-2024 (https://info.mobilerobot.com/safety-compliance/standards/ansi-itsdf-b56-5/)	EN ISO 3691-4 (https://info.mobilerobot.com/safety-compliance/standards/iso-3691-4/)

Operator responsibilities during manual operation — pallet pickup, judgment-heavy handling, and immediate takeover — are described in [Operator responsibilities](https://info.mobilerobot.com/safety-compliance/safe-deployment/operator-responsibilities/) (https://info.mobilerobot.com/safety-compliance/safe-deployment/operator-responsibilities/).

PRELIMINARY COMPLIANCE LIST

The J1600's compliance list comes from the preliminary January 2026 product documentation and is subject to change. Use current product documentation for deployment decisions.

EU Machinery Requirements

The J1600 is CE marked, and Directive 2006/42/EC — the Machinery Directive — heads its [compliance list](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/) (<https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/>). This page explains what the directive requires and how the J1600's standards list fits into it.

What the Machinery Directive requires

Directive 2006/42/EC sets the essential health and safety requirements that machinery must meet before it can be placed on the market in the European Union. For a manufacturer this means:

- performing a risk assessment and designing the machine to meet the essential requirements;
- compiling a technical file that documents conformity;
- issuing an EU Declaration of Conformity;
- affixing the CE marking.

Machinery designed to **harmonized standards** — European standards published in the Official Journal of the EU — benefits from a presumption of conformity with the requirements those standards cover.

The J1600's conformity basis

The harmonized standards in the J1600's compliance list address the machinery requirements from complementary angles:

Standard	Role
EN ISO 12100:2010 (https://info.mobilerobot.com/safety-compliance/standards/iso-12100/).	General risk-assessment and risk-reduction method
EN ISO 13849-1:2023 (https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/).	Reliability of safety-related control functions (Performance Levels)
EN ISO 3691-1:2015+A1:2020 (https://info.mobilerobot.com/safety-compliance/standards/iso-3691-1/).	Safety of self-propelled industrial trucks — manual mode
EN ISO 3691-4:2023 (https://info.mobilerobot.com/safety-compliance/standards/iso-3691-4/).	Safety of driverless industrial trucks — autonomous mode

The Machinery Directive is one of several EU acts in the compliance list; the others cover electromagnetic compatibility, radio equipment, hazardous substances, and batteries. See [EMC, RED, RoHS and Battery Regulations](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/>).

CE marking and documentation

The CE marking on the J1600 states conformity with the applicable EU legislation. The formal document behind it is the [CE Declaration of Conformity](https://info.mobilerobot.com/safety-compliance/certificates/ce-declaration-of-conformity/) (<https://info.mobilerobot.com/safety-compliance/certificates/ce-declaration-of-conformity/>).

PRELIMINARY COMPLIANCE LIST

The J1600's compliance list comes from the preliminary January 2026 product documentation and is subject to change. No declaration numbers or notified-body information are published here; use current product documentation for deployment decisions.

EMC, RED, RoHS and Battery Regulations

Beyond the [Machinery Directive](https://info.mobilerobot.com/safety-compliance/standards/eu-machinery-requirements/) (<https://info.mobilerobot.com/safety-compliance/standards/eu-machinery-requirements/>), the J1600's [compliance list](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/) (<https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/>), names three further EU directives and one EU regulation. Together they cover the vehicle's electronics, radio functions, materials, and battery.

EMC Directive 2014/30/EU

The Electromagnetic Compatibility (EMC) Directive requires that equipment neither generates electromagnetic disturbance that affects other equipment nor is unduly affected by such disturbance. It applies to the J1600's [electrical and electronic systems](https://info.mobilerobot.com/documentation/technical-reference/electrical-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/electrical-specifications/>), which include the drive electronics, the industrial NVIDIA Jetson AI computer, sensors, and the 15-inch touchscreen interface.

Radio Equipment Directive 2014/53/EU

The Radio Equipment Directive (RED) sets requirements for equipment that transmits or receives radio waves, covering safety, electromagnetic compatibility, and efficient spectrum use. It is relevant to the J1600's wireless connectivity: [Wi-Fi is optional for basic use](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>) but available for connected features and advanced integrations.

RoHS Directive 2011/65/EU

The RoHS Directive (Restriction of Hazardous Substances) limits the use of certain hazardous substances — such as lead, mercury, and cadmium — in electrical and electronic equipment placed on the EU market. It applies to the J1600's electronics and electrical components.

Batteries Regulation (EU) 2023/1542

The EU Batteries Regulation sets requirements for batteries placed on the EU market, covering safety, sustainability, and labelling across a battery's life cycle. It applies to the J1600's [24 V, 200 Ah lithium iron phosphate \(LiFePO4\) battery](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/>).

Battery transport is addressed separately by the UN 38.3 test regime; see [Battery UN 38.3 Documentation](https://info.mobilerobot.com/safety-compliance/certificates/battery-un-38-3-documentation/) (<https://info.mobilerobot.com/safety-compliance/certificates/battery-un-38-3-documentation/>).

Where these fit in the compliance list

EU act	Subject
Directive 2006/42/EC	Machinery safety (https://info.mobilerobot.com/safety-compliance/standards/eu-machinery-requirements/)
Directive 2014/30/EU	Electromagnetic compatibility
Directive 2014/53/EU	Radio equipment
Directive 2011/65/EU	Restriction of hazardous substances
Regulation (EU) 2023/1542	Batteries

All five underpin the J1600's CE marking, documented in the [CE Declaration of Conformity](https://info.mobilerobot.com/safety-compliance/certificates/ce-declaration-of-conformity/) (<https://info.mobilerobot.com/safety-compliance/certificates/ce-declaration-of-conformity/>).

PRELIMINARY COMPLIANCE LIST

The J1600's compliance list comes from the preliminary January 2026 product documentation and is subject to change. Use current product documentation for deployment decisions.

Certificates and Declarations

Conformity declarations, certificates, and compliance documentation for the J1600.



CE Declaration of Conformity

What the J1600's CE marking means, which EU directives and standards its conformity rests on, and how to obtain current conformity documentation.



Certificates

The certificates associated with the J1600 — the conformity documentation behind the CE marking and the Best in Intralogistics certificate awarded in 2026.



Compliance Statements

The J1600's compliance position — CE marking, EU directives, EN and ANSI standards, and battery transport testing — and how to read broader claims.



Battery UN 38.3 Documentation

What UN 38.3 testing covers for lithium batteries, why it matters when shipping the J1600, and how to request current battery transport documentation.

CE Declaration of Conformity

The J1600 is CE marked. This page explains what stands behind that marking and where to direct requests for the formal declaration document.

What a Declaration of Conformity is

An EU Declaration of Conformity (DoC) is the manufacturer's formal, signed statement that a product meets the EU legislation that applies to it. It identifies the product, lists the applicable directives and regulations, names the harmonized standards used, and takes legal responsibility for conformity. Affixing the CE marking requires that this declaration exists.

The J1600's conformity basis

The J1600's [compliance list](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/) (<https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/>), names the following EU acts and standards:

Category	Reference
Machinery safety	Directive 2006/42/EC — EU Machinery Requirements (https://info.mobilerobot.com/safety-compliance/standards/eu-machinery-requirements/)
Electromagnetic compatibility	Directive 2014/30/EU
Radio equipment	Directive 2014/53/EU
Hazardous substances	Directive 2011/65/EU (RoHS)
Batteries	Regulation (EU) 2023/1542
Harmonized standards	EN ISO 3691-4:2023 (https://info.mobilerobot.com/safety-compliance/standards/iso-3691-4/), EN ISO 13849-1:2023 (https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/), EN ISO 12100:2010 (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/)

Details on the non-machinery acts are in [EMC, RED, RoHS and Battery Regulations](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/).

Obtaining the declaration document

The Knowledge Center does not publish the declaration itself, declaration numbers, or notified-body information. For the current Declaration of Conformity and related conformity documentation, contact your local partner or the company at hello@mobilerobot.com.

PRELIMINARY COMPLIANCE LIST

The compliance list above comes from the preliminary January 2026 product documentation and is subject to change. Use current product documentation for deployment decisions.

Certificates

Two kinds of certificate come up in connection with the J1600: product-conformity documentation and the independent recognition the vehicle earned during the 2026 IFOY process. This page explains both and what is — and is not — published.

Conformity documentation

The J1600's conformity with EU legislation is documented through the manufacturer's [CE Declaration of Conformity](https://info.mobilerobot.com/safety-compliance/certificates/ce-declaration-of-conformity/), based on the directives, regulation, and harmonized standards in the [compliance list](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/).

The Knowledge Center does not publish product-safety certificates, notified-body certificates, declaration numbers, or country-specific approvals. For current conformity documentation, contact your local partner or hello@mobilerobot.com.

Best in Intralogistics Certificate 2026

The J1600 received the [Best in Intralogistics certificate](https://info.mobilerobot.com/newsroom/awards/best-in-intralogistics/) on 16 April 2026 at [TEST CAMP INTRALOGISTICS](https://info.mobilerobot.com/newsroom/events/test-camp/) in Dortmund's Westfalenhalle. The certificate recognizes IFOY finalists that successfully complete the three-stage IFOY Audit:

1. the practical IFOY Test;
2. the scientific [IFOY Innovation Check](https://info.mobilerobot.com/newsroom/awards/foy-innovation-check/), involving research institutions including Fraunhofer IML and Fraunhofer IPA;
3. assessment by the independent international jury.

Performance and application testing covered efficiency, sustainability, safety, and usability. The Chairman of the Board of the VDMA Materials Handling and Intralogistics Association formally presented the certificate.

The certificate preceded the final award: on 26 June 2026 the J1600 was announced as [IFOY Industrial Truck of the Year 2026](https://info.mobilerobot.com/newsroom/awards/ifo-y-award-2026/) (<https://info.mobilerobot.com/newsroom/awards/ifo-y-award-2026/>). Coverage of the award and the audit is in the [Newsroom](https://info.mobilerobot.com/category/newsroom/) (<https://info.mobilerobot.com/category/newsroom/>).



AWARD CERTIFICATE VERSUS COMPLIANCE CERTIFICATE

The Best in Intralogistics certificate documents independent testing and jury recognition. It is not a regulatory approval and does not replace the conformity documentation described above.

Compliance Statements

This page consolidates the J1600's compliance position in one place. The short version: the J1600 is CE marked and complies with EU and US safety requirements, especially ISO 3691-4 and ANSI/ITSDF B56.5.

The compliance list

European directives and regulation

- Directive 2006/42/EC — Machinery Directive ([EU Machinery Requirements](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
- Directive 2014/53/EU — Radio Equipment Directive (RED)
- Directive 2011/65/EU — RoHS
- Regulation (EU) 2023/1542 — Batteries Regulation

The non-machinery acts are explained in [EMC, RED, RoHS and Battery Regulations](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/>).

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/>) — driverless industrial trucks (autonomous mode)
- [EN ISO 13849-1:2023](https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/) (<https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/>) — safety-related control systems and Performance Levels
- [EN ISO 12100:2010](https://info.mobilerobot.com/safety-compliance/standards/iso-12100/) (<https://info.mobilerobot.com/safety-compliance/standards/iso-12100/>) — risk assessment and risk reduction
- [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/>) — self-propelled industrial trucks (manual mode)
- [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/>) — driverless industrial vehicles, US
- [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/>) — low lift and high lift trucks, US

Battery transport testing

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

How to read broader claims

The shorthand "complies with EU and US safety requirements" summarizes this list. General references to worldwide compliance or to OSHA do not add named certifications beyond the list above. For deployment in a specific country, confirm the applicable requirements with the company or your local partner.

Certificates and formal documents

[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 are not available in the Knowledge Center. The formal document behind the CE marking is described under [CE Declaration of Conformity](https://info.mobilerobot.com/safety-compliance/certificates/ce-declaration-of-conformity/) (<https://info.mobilerobot.com/safety-compliance/certificates/ce-declaration-of-conformity/>).

PRELIMINARY COMPLIANCE LIST

The compliance list is preliminary (January 2026) and subject to change. Use current product documentation for deployment decisions.

Battery UN 38.3 Documentation

The J1600's [compliance list](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/) (https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/) includes UN 38.3, the international test regime for transporting lithium batteries. This page explains what UN 38.3 is and where to direct requests for transport documentation.

What UN 38.3 is

UN 38.3 is subsection 38.3 of the UN *Manual of Tests and Criteria*. Lithium cells and batteries must pass its test series before they may be transported, whether installed in equipment or shipped separately. The tests subject cells and batteries to transport conditions such as altitude simulation, thermal cycling, vibration, shock, external short circuit, and overcharge.

Why it matters for the J1600

The J1600 runs on a [24 V, 200 Ah lithium iron phosphate \(LiFePO4\) battery](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) (https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/). Shipping a vehicle with a lithium battery falls under dangerous-goods transport rules, and carriers and freight forwarders commonly ask for evidence of UN 38.3 testing before accepting such a shipment. The J1600's compliance list names UN 38.3 as its battery transport-testing reference.

The battery's place in the wider regulatory picture — including the EU Batteries Regulation (EU) 2023/1542 — is described in [EMC, RED, RoHS and Battery Regulations](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/).

Obtaining transport documentation

The Knowledge Center does not publish UN 38.3 test summaries or test reports. For current battery transport documentation, contact your local partner or the company at hello@mobilerobot.com.

ⓘ PRELIMINARY COMPLIANCE LIST

The compliance list comes from the preliminary January 2026 product documentation and is subject to change. Use current product documentation for shipping and deployment decisions.

Safe Deployment

How to prepare a site, validate tasks, and run the J1600 safely from commissioning through daily operation.



Site Risk Assessment

Why a site risk assessment precedes J1600 deployment, what the commissioning package covers, and which site factors to evaluate before go-live.



Floor and Environment Requirements

The J1600's operating-environment limits: floor flatness, gradeability, bumps and gaps, temperature, humidity, and ingress protection.



Approved Loads and Pallets

Which pallets and load carriers the J1600 supports — open-base requirement, size and weight limits, EPAL and GMA types, and where operator judgment applies.



Charger Safety

Safe charging of the J1600 with the manual or automatic charger, the PL b charging-current relay, and what the LiFePO4 battery means for the site.



Operator Responsibilities

What the J1600 operator is responsible for — task initiation, manual pickup, confirming autonomous mode, takeover, and the judgment calls the robot leaves to people.



Commissioning and Validation

The J1600 installation and commissioning package: five days from feasibility check and risk assessment to task validation, training, acceptance test, and handover.



Residual Risks

The risks that remain after the J1600's safeguards — operating limits, manual-mode situations, and why deployment decisions need current product documentation.

Site Risk Assessment

Before the J1600 [goes live](https://info.mobilerobot.com/documentation/installation/deployment-checklist/) at a site, the site, the selected tasks, and the loads should be assessed for risk. This page describes what that assessment involves and which factors matter for a [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) pallet jack.

Where risk assessment fits

Risk assessment is the method at the heart of [ISO 12100](https://info.mobilerobot.com/safety-compliance/standards/iso-12100/), which appears in the J1600's [compliance list](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/): identify hazards, evaluate risks, and reduce them in order of priority. The vehicle's built-in safeguards handle the machine side; the site assessment handles everything the machine cannot know about your facility.

When the [installation and commissioning package](https://info.mobilerobot.com/safety-compliance/safe-deployment/commissioning-and-validation/) is purchased, its pre-installation phase covers this formally:

- a feasibility check for all selected tasks and loads;
- a risk assessment;
- a project plan.

Site factors to evaluate

The J1600's operating limits define what to check:

Factor	What to verify	Details
Floors	Level routes for autonomous travel (0% automatic gradeability), bumps up to 25 mm, gaps up to 20 mm, TR34 FM3 / FF 25 / FL 20 flatness	Floor and environment requirements (https://info.mobilerobot.com/safety-compliance/safe-deployment/floor-and-environment-requirements/)
Environment	Indoor use, 5–40°C, 20–80% relative humidity non-condensing, IP21 exposure limits	Floor and environment requirements (https://info.mobilerobot.com/safety-compliance/safe-deployment/floor-and-environment-requirements/)
Loads	Open-base carriers within 1,250 × 1,250 mm, up to 1,600 kg and 1,700 mm load height	Approved loads and pallets (https://info.mobilerobot.com/safety-compliance/safe-deployment/approved-loads-and-pallets/)
Manual-only areas	Slopes, dock plates, and ramps stay manual tasks; manual gradeability is 5% unloaded and 3% at full load	Operator responsibilities (https://info.mobilerobot.com/safety-compliance/safe-deployment/operator-responsibilities/)
Traffic	Routes shared with pedestrians and other vehicles, congestion points, and where the speed-dependent protective field needs room	How J1600 safety works (https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/)
Charging	Placement and setup of the manual or automatic charger	Charger safety (https://info.mobilerobot.com/safety-compliance/safe-deployment/charger-safety/)

Residual responsibility

A completed risk assessment does not remove the operator from the loop. Task initiation, pallet pickup, and judgment-heavy handling remain [human responsibilities](https://info.mobilerobot.com/safety-compliance/safety-overview/human-responsibilities/) (https://info.mobilerobot.com/safety-compliance/safety-overview/human-responsibilities/) by design, and some risks remain after safeguarding — see [Residual risks](https://info.mobilerobot.com/safety-compliance/safe-deployment/residual-risks/) (https://info.mobilerobot.com/safety-compliance/safe-deployment/residual-risks/).

i USE CURRENT PRODUCT DOCUMENTATION

No safety-distance curves, stopping distances, or validation reports are published in the Knowledge Center. Base deployment decisions on the current product documentation supplied with the vehicle.

Floor and Environment Requirements

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

Floor requirements

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
Floor flatness/levelness	TR34 FM3	FF 25 / FL 20
Ground clearance	30 mm	1.2 in

Autonomous travel is a level-floor application: automatic gradeability is 0%. Slopes, ramps, and dock plates remain manual tasks, within the manual-mode limits above. Plan autonomous routes accordingly during the [site risk assessment](https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/>).

Environmental requirements

Parameter	Metric	Imperial/other
Minimum operating temperature	5°C	41°F
Maximum operating temperature	40°C	104°F
Relative humidity	20–80%	non-condensing
Ingress protection	IP21	protected against objects over 12.5 mm and vertically dripping water

IP21 means the vehicle is protected against solid objects larger than 12.5 mm and vertically dripping water — it is an indoor rating, not protection against wash-down, spray, or outdoor conditions.

Real-world floors

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

No infrastructure changes are required within these limits: the J1600 navigates by [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>) without tracks, wires, reflectors, or building modifications.

Related requirements

- Load and carrier limits: [Approved loads and pallets](https://info.mobilerobot.com/safety-compliance/safe-deployment/approved-loads-and-pallets/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/approved-loads-and-pallets/>)
- Full specification table: [J1600 technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>)
- Validation at go-live: [Commissioning and validation](https://info.mobilerobot.com/safety-compliance/safe-deployment/commissioning-and-validation/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/commissioning-and-validation/>)

ⓘ PRELIMINARY SPECIFICATIONS

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

Approved Loads and Pallets

The J1600 moves pallets and other forkable load carriers within a defined envelope. This page sets out the limits and the judgment calls that remain with the operator.

The open-base requirement

The J1600 requires an **open-base carrier with no bottom deck board** so its forks can enter. Fork geometry: 1,150 mm long, 180 mm wide, 60 mm thick, with 680 mm outer and 320 mm inner fork distance.

Load envelope

Parameter	Limit
Maximum rated payload	1,600 kg / about 3,500 lb
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

The exact maximum envelope is 1,250 mm; some shorter product summaries round it to 1.2 m.

Supported carrier types

Carrier	Support
EPAL Euro Pallet	Supported
EPAL 3	Supported
EPAL 6	Supported
GMA pallets	All GMA pallets with an open base
Custom carriers	Any forkable open-base carrier within the size limits

Beyond standard pallets, demonstrated examples include [open cages and barrels](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/>). Compatibility depends on base geometry, size, stability — and operator judgment.

Where judgment applies

[Pallet pickup is always manual](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>), which keeps a person's assessment in the loop for exactly the cases that need it: damaged pallets, top-heavy or leaning loads, loose shrink wrap, and [sensitive or unstable goods](https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/) (<https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/>). Manual mode also allows picks and drops at up to 1,600 mm, while autonomous delivery is at floor level. See [Operator responsibilities](https://info.mobilerobot.com/safety-compliance/safe-deployment/operator-responsibilities/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/operator-responsibilities/>).

NO BLANKET APPROVAL

There is no blanket approval for every carrier or for hazardous materials. Assess non-standard carriers and critical loads case by case as part of the [site risk assessment](https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/>).

Related pages

- Load detection is a monitored safety function: see [Load detection](https://info.mobilerobot.com/safety-compliance/safety-functions/load-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/load-detection/>).

- Full vehicle dimensions and specifications: [J1600 technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Charger Safety

The J1600 charges either manually or through 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 the safety-relevant aspects of both.

The battery

The J1600 uses a [24 V, 200 Ah lithium iron phosphate \(LiFePO4\) battery](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/>). Charging is monitored by a dedicated safety function: the **charging-current relay**, assigned Performance Level PL b under [ISO 13849-1](https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/) (<https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/>). Details of the function are on the [Charging safety](https://info.mobilerobot.com/safety-compliance/safety-functions/charging-safety/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/charging-safety/>) page.

Battery transport testing is covered by UN 38.3 — see [Battery UN 38.3 Documentation](https://info.mobilerobot.com/safety-compliance/certificates/battery-un-38-3-documentation/) (<https://info.mobilerobot.com/safety-compliance/certificates/battery-un-38-3-documentation/>).

Manual charging

Manual charging works the way operators of a conventional electric pallet jack expect: plug in the charger during a break or whenever the machine is idle. Charging restores approximately 47 percentage points of charge per hour.

Automatic charging

With the optional automatic charger, the robot drives to the station, positions itself at the charger, and a charging interface extends to the vehicle's charging plates. No person handles connectors, and the robot can [opportunity-charge](https://info.mobilerobot.com/applications/scenarios/automatic-charging/) (<https://info.mobilerobot.com/applications/scenarios/automatic-charging/>) whenever it is not busy.

Two points matter for safe setup:

- Automatic charging is an advanced automation capability, and its [station placement](https://info.mobilerobot.com/documentation/installation/charger-installation/) (<https://info.mobilerobot.com/documentation/installation/charger-installation/>)

becomes part of the robot's autonomous routes — include it in the [site risk assessment](https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/>).

- When purchased with the [installation and commissioning package](https://info.mobilerobot.com/safety-compliance/safe-deployment/commissioning-and-validation/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/commissioning-and-validation/>), automatic-charging setup is performed on Day 1 by the commissioning team.

Charging and runtime figures

Parameter	Value
Charging rate	approximately 47 percentage points per hour
Drain, driving fully loaded	approximately 13% per hour
Drain, driving unloaded	approximately 12% per hour
Drain, standby	approximately 2% per hour

Runtime exceeds eight hours in a typical duty cycle. See [J1600 technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>) for the full battery data.

USE CURRENT PRODUCT DOCUMENTATION

Follow the charging instructions in the current product documentation supplied with the vehicle and charger. The Knowledge Center does not replace the product manual.

Operator Responsibilities

The J1600 is built around human-in-the-loop automation: the operator keeps authority over what the robot does and when. This page lists what that means in daily operation.

Core responsibilities

- **Initiate every task.** [Autonomous work](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>) starts only when a person selects or creates a task on the touchscreen.
- **Pick up pallets manually.** [Pallet pickup is always manual](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>). The operator judges pallet condition, load stability, and the approach before lifting.
- **Confirm entry into automatic mode** (<https://info.mobilerobot.com/safety-compliance/safety-overview/manual-and-autonomous-mode-safety/>). The robot asks for confirmation, and the operator confirms with the physical start/resume button.
- **Step clear before autonomous travel.** The interface instructs the operator to step away before the vehicle starts.
- **Take over when conditions require it.** Grabbing or moving the tiller returns the vehicle to manual control immediately; emergency stops are always available. See [Emergency stops and 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/>).
- **Select the operating mode deliberately.** 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.

Judgment calls that stay with the operator

The division of work is deliberate: the robot automates repetitive travel, and [the operator handles everything that needs context](https://info.mobilerobot.com/documentation/user-guides/operator-manual/) (<https://info.mobilerobot.com/documentation/user-guides/operator-manual/>) —

- spotting damaged pallets, broken boards, or protruding nails before lifting;
- judging [top-heavy, leaning, or poorly stacked loads](https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/) (<https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/>);

- tucking away loose shrink-wrap tails before they snag;
- locating pallets that are not exactly where the system expects them;
- catching leaking or damaged goods before delivery;
- handling dock plates, ramps, and slopes manually — automatic gradeability is 0%;
- improvising a route through congested areas;
- reprioritizing urgent deliveries.

The reasoning behind this split is described under [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/>), and the safety dimension under [Human responsibilities](https://info.mobilerobot.com/safety-compliance/safety-overview/human-responsibilities/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/human-responsibilities/>).

Training

About 30 minutes of [training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>) is sufficient for an existing electric-pallet-jack operator. The vehicle carries an on-screen tutorial, and the [commissioning package](https://info.mobilerobot.com/safety-compliance/safe-deployment/commissioning-and-validation/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/commissioning-and-validation/>) adds group training plus individual hands-on practice for up to six operators.

Boundaries to respect

Operators should keep tasks within the vehicle's approved envelope: [approved loads and pallets](https://info.mobilerobot.com/safety-compliance/safe-deployment/approved-loads-and-pallets/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/approved-loads-and-pallets/>), [floor and environment requirements](https://info.mobilerobot.com/safety-compliance/safe-deployment/floor-and-environment-requirements/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/floor-and-environment-requirements/>), and the site rules established by the [site risk assessment](https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/>).

OPERATOR AUTHORITY IS A DESIGN PRINCIPLE, NOT A FALLBACK

Human control complements the safety system and its certified components — independent safety controller, two 2D safety LiDARs, emergency stops, and the 360-degree protective field. It never replaces them. See [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/>).

Commissioning and Validation

The J1600 works out of the box, but sites that want a structured, validated go-live can purchase a fixed-price [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/>). This page describes what it contains.

Package at a glance

Item	Detail
End-user list price	€10,000
Duration	Five on-site days plus pre-installation work
Purpose	Reduce go-live risk through structured setup, validation, training, and handover

Pre-installation

Before anyone is on site:

- feasibility check for all selected tasks and loads;
- risk assessment — see [Site risk assessment](https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/>);
- project plan.

The five on-site days

Day 1 — setup and validation

Unboxing; Wi-Fi connection if desired; automatic-charging setup if purchased (see [Charger safety](https://info.mobilerobot.com/safety-compliance/safe-deployment/charger-safety) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/charger-safety>)).

y/)); creation of up to 25 [drop points](https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/) (<https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/>); task validation; safety validation.

Day 2 — training

[Group training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>) for all operators, plus individual hands-on practice for up to six operators. See [Operator responsibilities](https://info.mobilerobot.com/safety-compliance/safe-deployment/operator-responsibilities/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/operator-responsibilities/>) for what operators take over from here.

Days 3–4 — supervised operation

Monitoring of robot performance; on-site troubleshooting and support; additional operator training as needed.

Day 5 — acceptance and handover

Acceptance test; handover.

Add-ons

- integration with other software or equipment;
- additional validated drop points beyond the included 25;
- [Fleet Management System setup](https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/>).

Commissioning versus out-of-box deployment

The package is an optional commercial service, not a prerequisite. [Basic deployment](https://info.mobilerobot.com/documentation/getting-started/first-time-setup/) (<https://info.mobilerobot.com/documentation/getting-started/first-time-setup/>) needs no building modifications, tracks, wires, or reflectors; Wi-Fi is optional; and [typical setup takes hours to one day](https://info.mobilerobot.com/applications/results/faster-deployment/) (<https://info.mobilerobot.com/applications/results/faster-deployment/>). Operators add new locations themselves by driving to a point and saving it. The commissioning package matters most when go-live risk, task complexity, or the number of operators justifies a validated, documented process.

Partners may deliver the commissioning service themselves; current partner terms are available from the [partner team](https://info.mobilerobot.com/partners/become-a-partner/cont) (<https://info.mobilerobot.com/partners/become-a-partner/cont>).

[act-the-partner-team/](#)). See the [partner section](#) (<https://info.mobilerobot.com/category/partners/>) for the partner model.

i VALIDATION IS SITE-SPECIFIC

Task and safety validation confirm behaviour for your tasks, loads, and routes — within the limits in [Floor and environment requirements](https://info.mobilerobot.com/safety-compliance/safe-deployment/floor-and-environment-requirements/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/floor-and-environment-requirements/>) and [Approved loads and pallets](https://info.mobilerobot.com/safety-compliance/safe-deployment/approved-loads-and-pallets/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/approved-loads-and-pallets/>).

Residual Risks

No safeguarding removes risk entirely. This page describes the risks that remain after the J1600's built-in protective measures, and where operator vigilance and site discipline stay essential.

Why residual risks are documented

The risk-reduction method of [ISO 12100](https://info.mobilerobot.com/safety-compliance/standards/iso-12100/) (https://info.mobilerobot.com/safety-compliance/standards/iso-12100/) ends with *information for use*: after design measures and safeguarding, the remaining risks must be communicated so users can manage them. The J1600's [layered protection](https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/) (https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/) — independent safety controller, two 2D safety LiDARs, a speed-dependent 360-degree protective field, emergency stops, and safety functions [rated up to PL d](https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) (https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) — reduces risk substantially, and the built-in safety functions improve predictability compared with manual pallet handling. It does not make the vehicle risk-free.

Where risk remains

- **[Manual 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/) relies on the operator.** Pallet pickup, high-level handling up to 1,600 mm, dock plates, slopes, and congested areas are deliberately manual. In these situations the operator's judgment is the protective measure. See [Operator responsibilities](https://info.mobilerobot.com/safety-compliance/safe-deployment/operator-responsibilities/) (https://info.mobilerobot.com/safety-compliance/safe-deployment/operator-responsibilities/).
- **Operating limits are boundaries, not suggestions.** Autonomous travel assumes level floors (0% automatic gradeability), indoor conditions, 5–40°C, and IP21-compatible exposure. Outside these limits, behaviour is not specified. See [Floor and environment requirements](https://info.mobilerobot.com/safety-compliance/safe-deployment/floor-and-environment-requirements/) (https://info.mobilerobot.com/safety-compliance/safe-deployment/floor-and-environment-requirements/).
- **Loads are not universally approved.** There is no blanket approval for every carrier or for hazardous materials; stability and base geometry must be judged case by case. See [Approved loads and pallets](https://info.mobilerobot.com/safety-compliance/safe-deployment/approved-loads-and-pallets/) (https://info.mobilerobot.com/safety-compliance/safe-deployment/approved-loads-and-pallets/).

- **The protective field needs room.** The [safety field grows with speed](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/>). Route planning should account for pinch points and shared traffic identified in the [site risk assessment](https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/>).

Data that is not available

Accident-rate test data, safety-distance curves, stopping distances, and validation reports are not available. The [reduction in workplace accidents](https://info.mobilerobot.com/applications/results/safety-improvements/) (<https://info.mobilerobot.com/applications/results/safety-improvements/>) compared with manual pallet handling is a design intent, not a measured result.



BASE DEPLOYMENT DECISIONS ON CURRENT DOCUMENTATION

Use the current product documentation supplied with the vehicle — not this Knowledge Center alone — for site-specific safety decisions, and complete a [site risk assessment](https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/>) before go-live.

Applications & Customer Stories

Use cases, operating scenarios, industries, results, and application planning.



Use Cases

12 pages



Operating Scenarios

12 pages



Industries

8 pages



Customer Stories

2 pages



Results and Business Impact

8 pages



Application Planning

8 pages

Use Cases

Where the J1600 fits in real pallet flows — from inbound receiving and production supply to cross-docking, buffers, brownfield sites, and alternative load carriers.



Inbound Receiving

Using the J1600 for inbound receiving — the operator unloads the truck manually, and the robot delivers each pallet autonomously to inspection or storage.



Production Supply

Feeding production lines with the J1600 — operators prepare pallets of materials or components, and the robot delivers them to the line on demand.



Cross-Docking

Cross-docking with the J1600 — shuffling pallets between multiple origins and destinations by recombining saved locations, without a bespoke task for every pair.



Temporary Storage

Using the J1600 for temporary storage — creating short-lived floor storage points in minutes when demand, season, or layout changes.



Buffer and Staging Management

Managing buffers and staging areas with the J1600 — autonomous transport between production lines, staging zones, and storage keeps material flow steady.



Warehouse-to-Production Transport

Automating the long travel segments from warehouse zones to production with the J1600, while operators keep the pickup and the judgment calls.



Production-to-Shipping Transport

Moving finished goods from the end of the production line to shipping or outbound staging with the J1600's autonomous floor-level delivery.



Local Work-Cell Automation

Automating a single work cell or stand-alone material flow inside a larger facility with one J1600, without launching a site-wide fleet project.



Brownfield Automation

Deploying the J1600 in brownfield facilities — existing buildings with changing layouts get incremental pallet-transport automation without permanent infrastructure.



Sensitive or Unstable Loads

Handling sensitive, unstable, or awkward loads with the J1600 — manual judgment for pickup and close maneuvering, autonomous travel for the long route.



Open Cages and Alternative Load Carriers

Which pallets and load carriers the J1600 can move — EPAL and open-base GMA pallets, open cages, barrels, and custom carriers, with exact size limits.



Multi-Point Pallet Transport

Running multi-point-to-multi-point pallet flows on the J1600 by combining saved locations freely — no bespoke task for every origin-destination pair.

Inbound Receiving

Inbound receiving pairs the two halves of [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (https://info.mobilerobot.com/products/j1600/dual-mode/), naturally: the truck and dock area demand judgment, while the trip from the dock to inspection or storage is repetitive travel. The operator unloads manually, hands each pallet to the J1600, and stays at the dock while the robot makes the delivery.

How the flow works

1. Unload the trailer manually using the tiller, exactly as with a conventional electric pallet jack.
2. Select a saved drop point — inbound inspection, a storage zone, or a buffer location — on the touchscreen.
3. Choose **return to origin** as the post-delivery behavior, confirm autonomous mode with the start button, and step clear.
4. The J1600 travels at up to 5.4 km/h (1.5 m/s), avoids obstacles on the way, drops the pallet at floor level, and returns to you at the dock for the next pallet.

This deliver-and-return loop is the most commonly demonstrated J1600 task. See [Deliver and Return](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) (https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) and [Manual Pickup and Autonomous Delivery](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/).

Why the dock stays manual

Truck unloading concentrates the situations where human context matters most:

- **Dock plates and ramps.** Automatic mode has 0% gradeability; it is a [level-floor application](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/) (https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/). [Manual mode](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (https://info.mobilerobot.com/documentation/user-guides/manual-operation/) handles gradients up to 5% unloaded and 3% at full load, so dock plates, bumps, and trailer misalignment are operator work.
- **Pallet condition.** A broken bottom board, a protruding nail, or a loose shrink-wrap tail is spotted and handled before it becomes a jam or a safety hazard.

- **Load stability.** [Top-heavy, leaning, or poorly stacked inbound loads](https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/) (<https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/>) get a human judgment call before lifting.
- **Congestion.** A [crowded receiving area](https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/) (<https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/>) with overflow pallets calls for an improvised manual route.

See [Handling Exceptions and Irregular Loads](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/) (<https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/>) for the full list of judgment tasks that remain with the operator.

What the robot removes

[The walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) (<https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/>). Each autonomous delivery removes a round trip that the operator would otherwise walk, whether the route is a few meters or well over 100 meters. Across a receiving shift, the J1600 is designed to remove [up to 80% of the operator time spent on repetitive transport](https://info.mobilerobot.com/applications/results/productivity-improvements/) (<https://info.mobilerobot.com/applications/results/productivity-improvements/>), while the operator keeps unloading at the dock.

Setting up a receiving flow

- Drive once to each inspection, storage, or buffer point and tap **Save location**. There is no software limit on saved locations.
- No tracks, wires, reflectors, or building changes are needed — navigation uses [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>).
- An operator who already uses an electric pallet jack needs about 30 minutes of [training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>).

If receiving volumes shift, add or change drop points in minutes — see [Temporary Location Setup](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>) and [Temporary Storage](https://info.mobilerobot.com/applications/use-cases/temporary-storage/) (<https://info.mobilerobot.com/applications/use-cases/temporary-storage/>).

For load limits at the dock, see [Open Cages and Alternative Load 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/>) and the [J1600 technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).



Production Supply

In production supply, an operator prepares or picks a pallet of materials or components, and the J1600 delivers it to the production line on demand. The person keeps the judgment-heavy work — picking, sequencing, and prioritizing — while the robot covers the distance between warehouse and line.

How the flow works

1. Prepare the pallet at the warehouse, supermarket, or kitting area and pick it up manually.
2. Select the saved drop point at the line or work cell on the touchscreen.
3. Choose what happens after delivery: [return to you for the next pallet](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>), continue to another point, park, or [stop and wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/>) at the line.
4. Confirm autonomous mode and continue preparing the next load while the robot travels.

The J1600 delivers at floor level and carries up to 1,600 kg per trip. See [Manual Pickup and Autonomous Delivery](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>) for the full task workflow.

Calling material to the line

With the come-to-me function, a line-side worker can call the robot to a location from a mobile app or web interface instead of waiting for a scheduled round. This turns replenishment into a pull signal: the line calls, the operator loads, the robot delivers. See [Come-to-Me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>).

Routing through production areas

Preferred travel zones can be defined so autonomous traffic keeps to safer corridors through production areas. The robot's 360-degree safety field and speed-dependent protective zones cover forward and reverse travel; blue light strips on the vehicle

show the protected area. See [Operation in Crowded Environments](https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/) (<https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/>) and [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/>).

When priorities change

A starving production line is an urgency call, not a system error. The operator can reprioritize immediately: take the tiller, and the vehicle is back under manual control. Urgent reprioritization is one of the situations where [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/>) keeps its value — see [Handling Exceptions and Irregular Loads](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/) (<https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/>).

Related flows

- Longer chains from receiving through storage into production: [Warehouse-to-Production Transport](https://info.mobilerobot.com/applications/use-cases/warehouse-to-production-transport/) (<https://info.mobilerobot.com/applications/use-cases/warehouse-to-production-transport/>)
- Moving finished goods away from the line: [Production-to-Shipping Transport](https://info.mobilerobot.com/applications/use-cases/production-to-shipping-transport/) (<https://info.mobilerobot.com/applications/use-cases/production-to-shipping-transport/>)
- Line-side buffers and staging areas: [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/>)
- A single line or cell inside a larger site: [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/>).

Cross-Docking

Cross-docking moves pallets from inbound doors to outbound doors or staging lanes with little or no storage in between. Origins and destinations multiply quickly, and lanes change with the day's volume. The J1600 fits this pattern because [saved locations](https://info.mobilerobot.com/documentation/user-guides/location-management/) (<https://info.mobilerobot.com/documentation/user-guides/location-management/>) can be recombined freely: you do not teach a bespoke task for every origin-destination pair.

How the flow works

1. Save each door, lane, and staging point once by driving there and tapping **Save location**. There is no software limit on the number of saved locations.
2. At the inbound side, [pick up the pallet manually](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>) — trailer interiors and dock plates are manual work, since automatic mode requires [level floors](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/) (<https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/>).
3. Select the outbound lane or staging point for this pallet and choose the post-delivery behavior: return to you, continue to another point, park, or wait.
4. Confirm autonomous mode. The robot delivers at floor level and follows the selected behavior.

Any saved point can be the next origin or destination, which is what makes multi-point-to-multi-point shuffling practical. See [Multi-Point Pallet Transport](https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/) (<https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/>) and [A-to-B-to-C Transport](https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/) (<https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/>).

Built for changing lanes

Cross-dock layouts rarely stand still. Observations at a major e-commerce cross-docking facility — a visit that shaped the J1600's [flexibility-first design](https://info.mobilerobot.com/applications/results/operational-flexibility/) (<https://info.mobilerobot.com/applications/results/operational-flexibility/>) — found layout, flow, buffer, and SKU-mix changes occurring several times per week, even in a heavily automated operation. The J1600 answers this with:

- **Teach and repeat** (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>): add or move a lane in minutes by driving there once and saving it — see

[Temporary Location Setup](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>).

- **3D LiDAR SLAM navigation** (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>): the robot continuously updates its environment model and routes around obstacles, with no tracks, wires, or reflectors to relocate — see [Dynamic Route Changes](https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/) (<https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/>).
- **Immediate manual takeover:** when a lane overflows or a pallet is misplaced, grab the tiller and handle it — see [Handling Exceptions and Irregular Loads](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/) (<https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/>).

Busy floors

Cross-dock floors are crowded with people, pallet jacks, and staged freight. The J1600's 360-degree safety field, two 2D safety LiDARs, and speed-dependent protective zones support autonomous travel through this traffic, and blue light strips show the protected area. See [Operation in Crowded Environments](https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/) (<https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/>).

Capacity per trip

Each trip carries up to 1,600 kg at up to 5.4 km/h, with loads up to 1,250 × 1,250 mm including overhang on any supported open-base carrier. See [Open Cages and Alternative Load 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/>) and the [J1600 technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Temporary Storage

Demand peaks, seasonal inventory, and project stock all create the same need: floor storage that exists this month and is gone the next. The J1600 treats a storage point as nothing more than a [saved location](https://info.mobilerobot.com/documentation/user-guides/location-management/) (<https://info.mobilerobot.com/documentation/user-guides/location-management/>), so temporary storage areas can be created, used, and abandoned without any automation engineering.

Creating a temporary storage point

1. Drive the J1600 manually to the spot you want to use.
2. Tap **Save location** and name the point.
3. Start sending pallets there autonomously.

That is the whole setup. A new point takes minutes, there is no software limit on the number of saved locations, and no tracks, wires, reflectors, or building changes are involved. See [Temporary Location Setup](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>) for the workflow in detail.

Working the temporary area

- **Filling:** pick each pallet manually, select the temporary point, and let the robot deliver at floor level. Choose **return to origin** to keep a steady loop going — see [Deliver and Return](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>).
- **Emptying:** when the stock moves on, the same points work in reverse as origins for [delivery to production](https://info.mobilerobot.com/applications/use-cases/warehouse-to-production-transport/) (<https://info.mobilerobot.com/applications/use-cases/warehouse-to-production-transport/>), shipping, or permanent storage.
- **Combining:** temporary points combine freely with every other saved location, so they slot into [multi-point flows](https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/) (<https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/>) and [cross-docking](https://info.mobilerobot.com/applications/use-cases/cross-docking/) (<https://info.mobilerobot.com/applications/use-cases/cross-docking/>) without new tasks per pair.

Why this suits changing operations

Variable layouts, temporary storage, and a changing SKU mix are exactly the conditions that make rigid automation projects slow to adapt. Because the J1600 maps with [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) and continuously updates its understanding of the environment, a rearranged floor does not require reconfiguration by an automation expert — an operator drives, saves, and carries on. See [Brownfield Automation](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) and [Dynamic Route Changes](https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/).

Buffer zones that live between production steps follow the same pattern on a shorter clock — see [Buffer and Staging Management](https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/).

Practical limits

Temporary storage points must sit on [level indoor floors along the autonomous route](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/) (automatic gradeability is 0%), within the J1600's [operating environment](https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/) of 5–40 °C. Practical capacity is limited by warehouse space, not software. See the [J1600 technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/).

Buffer and Staging Management

Buffers and staging areas absorb the timing differences between process steps: between two production lines, between production and [shipping](https://info.mobilerobot.com/applications/industries/shipping-and-dispatch/), or between [receiving](https://info.mobilerobot.com/applications/use-cases/inbound-receiving/) and putaway. Keeping them fed and cleared is constant, repetitive transport — the work the J1600 is built to take over.

How the flow works

The J1600 transports pallets between lines, staging areas, and storage zones. The operator [picks manually](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) where judgment is needed; the robot handles the travel:

1. Pick up the pallet at the line end, storage zone, or receiving area.
2. Select the saved buffer or staging point on the touchscreen.
3. Choose the post-delivery behavior — for staging work, **Stop and wait** keeps the robot at the staging area ready for redirection, while **return to origin** keeps a feeding loop running.
4. Confirm autonomous mode and step away.

See [Deliver and Wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/) and [Deliver and Return](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) for the two patterns most used in buffer work.

Steadier flow as the goal

Moving buffer transport onto the robot gives the operation a steadier rhythm: deliveries repeat consistently instead of depending on whoever is free to walk. Steadier material flow and throughput, [more productive use of skilled labor](https://info.mobilerobot.com/applications/results/labor-reallocation/), and less [repetitive walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) are the core outcomes the J1600 targets in this role. [Production logistics](https://info.mobilerobot.com/applications/industries/internal-production-logistics/) and buffer management are among the primary applications the company designs and presents the product around.

Buffers move — so do saved points

Buffer zones are the most short-lived locations in a facility. When a staging lane shifts or a new buffer opens for a demand peak:

- add the point in minutes by driving there and tapping **Save location** — see [Temporary Location Setup](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>);
- recombine it freely with existing points for [multi-point flows](https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/) (<https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/>);
- longer-lived overflow areas follow the [Temporary Storage](https://info.mobilerobot.com/applications/use-cases/temporary-storage/) (<https://info.mobilerobot.com/applications/use-cases/temporary-storage/>) pattern.

There is no software limit on [saved locations](https://info.mobilerobot.com/documentation/user-guides/location-management/) (<https://info.mobilerobot.com/documentation/user-guides/location-management/>); floor space is the practical limit.

Fit and limits

Buffer and staging transport suits the J1600 when routes are indoor and level (automatic gradeability is 0%), drops are at floor level, and loads stay within 1,600 kg on an open-base carrier up to 1,250 × 1,250 mm including overhang. See [Open Cages and Alternative Load 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/>) and the [J1600 technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Adjacent flows: [Production Supply](https://info.mobilerobot.com/applications/use-cases/production-supply/) (<https://info.mobilerobot.com/applications/use-cases/production-supply/>) upstream, [Production-to-Shipping Transport](https://info.mobilerobot.com/applications/use-cases/production-to-shipping-transport/) (<https://info.mobilerobot.com/applications/use-cases/production-to-shipping-transport/>) downstream.

Warehouse-to-Production Transport

The chain from [goods receipt](https://info.mobilerobot.com/applications/industries/goods-receiving/) through storage into production is connected by long, repetitive travel segments. Those segments — not the nuanced handling at either end — are what the J1600 automates. The operator picks in the warehouse; the robot walks the distance.

The division of work

Operator	J1600
Pick the pallet in the warehouse, judging load stability and pallet condition	Carry up to 1,600 kg along the saved route at up to 5.4 km/h
Select the production-side destination and post-delivery behavior	Navigate with 3D LiDAR SLAM and avoid obstacles on the way
Confirm entry into autonomous mode	Drop the pallet at floor level at the line or cell
Handle exceptions and urgent priority changes	Return, park, continue to another point, or wait

This is [human-in-the-loop automation](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/) applied to the longest walks in the building.

Route length barely matters

The concept is the same whether the route is a few meters or well over 100 meters: [pick manually, send autonomously](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/). Longer routes simply return more [saved walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) per trip, which is why warehouse-to-production legs are often the highest-value routes to hand over. The J1600 is designed to remove [up to 80% of the operator time spent on this repetitive transport](https://info.mobilerobot.com/applications/results/productivity-improvements/).

Setting up the chain

1. Save the warehouse-side pickup areas, any intermediate buffer points, and the production-side drop points by driving to each once — see [Temporary Location Setup](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>).
2. For a simple feed, use [Deliver and Return](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>): the robot brings the empty forks back to you in the warehouse.
3. For chained moves — warehouse to buffer, buffer to line — use [A-to-B-to-C Transport](https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/) (<https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/>) or full [multi-point flows](https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/) (<https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/>).
4. Let line-side workers pull material on demand with [Come-to-Me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>).

Preferred travel zones can be defined so the autonomous leg keeps to safer corridors through production areas — see [Operation in Crowded Environments](https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/) (<https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/>).

Requirements

The autonomous leg needs [indoor, level floors](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/) (<https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/>) (automatic gradeability is 0%; manual mode handles up to 5% unloaded, 3% at full load), floor quality to TR34 FM3 / FF 25–FL 20, bumps up to 25 mm, and gaps up to 20 mm. Operating temperature is 5–40 °C. Full details: [J1600 technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Related flows: [Production Supply](https://info.mobilerobot.com/applications/use-cases/production-supply/) (<https://info.mobilerobot.com/applications/use-cases/production-supply/>) · [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/>) · [Production-to-Shipping Transport](https://info.mobilerobot.com/applications/use-cases/production-to-shipping-transport/) (<https://info.mobilerobot.com/applications/use-cases/production-to-shipping-transport/>).

Production-to-Shipping Transport

At the end of the line, finished pallets need to reach [shipping](https://info.mobilerobot.com/applications/industries/shipping-and-dispatch/) or an outbound staging lane — a repetitive run that pulls operators away from the line every time. With the J1600, the line-end operator loads and sends; the robot makes the trip.

How the flow works

1. [Pick up the finished pallet manually](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) at the line end.
2. Select the saved shipping or staging drop point on the touchscreen.
3. Choose the post-delivery behavior:
 - **Return to origin** to come straight back for the next pallet — see [Deliver and Return](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/);
 - **Stop and wait** to hold at the staging lane until redirected — see [Deliver and Wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/);
 - **Go to parking** when the run ends, keeping the vehicle out of the way — see [Deliver and Park](https://info.mobilerobot.com/applications/scenarios/deliver-and-park/).
4. [Confirm autonomous mode](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) with the start button and step clear.

The robot drops at floor level in the staging lane, which suits outbound lanes organized as floor positions. Loading the trailer itself stays manual: dock plates and trailer interiors exceed the 0% automatic gradeability, while manual mode handles up to 5% unloaded and 3% at full load.

Keeping the line productive

Every autonomous run keeps a person at the value-adding end of the process instead of [walking pallets](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) across the building. Steadier outbound flow, less non-value-added transport, and [more productive use of skilled labor](https://info.mobilerobot.com/applications/results/labor-reallocation/) are the outcomes this flow targets — [up to 80% of the operator time](#)

[s://info.mobilerobot.com/applications/results/productivity-improvements/](https://info.mobilerobot.com/applications/results/productivity-improvements/)) on the repetitive leg is designed out.

When shipping volumes spike, staged outbound freight crowds the floor. The J1600's 360-degree safety field and speed-dependent protective zones handle traffic on the way — see [Operation in Crowded Environments](https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/) (<https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/>) — and the operator takes over manually for the improvised moments, per [Handling Exceptions and Irregular Loads](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/) (<https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/>).

Combining with upstream flows

One J1600 can serve both directions of the line in [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>): materials in via [Production Supply](https://info.mobilerobot.com/applications/use-cases/production-supply/) (<https://info.mobilerobot.com/applications/use-cases/production-supply/>), finished goods out via this flow, with [A-to-B-to-C tasks](https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/) (<https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/>) chaining the legs. Outbound staging lanes are saved locations like any other, so they can be added or moved in minutes as the shipping schedule changes — see [Temporary Location Setup](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>) and [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/>).

Load and route requirements

Up to 1,600 kg per trip on an open-base carrier within 1,250 × 1,250 mm including overhang, load height up to 1,700 mm from the floor, on [indoor level routes](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/) (<https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/>) at 5–40 °C. Details: [Open Cages and Alternative Load 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/>) · [J1600 technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Local Work-Cell Automation

Large facilities contain many small material flows: a cell that feeds one line, a packing station with its own loop, a subassembly area with a dedicated shuttle run. Each is too small — or changes too often — to justify a conventional fleet project. The J1600 serves these stand-alone flows one cell at a time.

The local-flow problem

A full automation project prices and plans for the whole site: fleet management, systems integration, infrastructure, and expert configuration. A local flow of a few pallet moves per hour cannot carry that overhead, so it stays manual by default. The J1600 inverts the economics:

- one vehicle, [deployed in hours or a 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/>);
- [no mandatory warehouse-management-system, fleet-manager, or IT integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>);
- [Wi-Fi optional for basic use](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>);
- no tracks, wires, reflectors, or building modifications;
- about 30 minutes of [training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>) for an operator who already uses an electric pallet jack.

The cell's own operator runs it: pick manually, send autonomously, take over any time. See [Manual Pickup and Autonomous Delivery](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>) and [Mixed Manual and Autonomous Work](https://info.mobilerobot.com/applications/scenarios/mixed-manual-and-autonomous-work/) (<https://info.mobilerobot.com/applications/scenarios/mixed-manual-and-autonomous-work/>).

Typical cell patterns

- A loop between the cell and its supermarket or storage zone — [Deliver and Return](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>).
- Feeding the cell on demand from a mobile or web call — [Come-to-Me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>).

- Clearing finished work to the next stage — [A-to-B-to-C Transport](https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/) (<https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/>)
- Cell-adjacent buffers — [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/>)

When the cell moves or the [layout changes](https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/) (<https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/>), the operator re-teaches the points by driving and saving — no automation expert required. See [Temporary Location Setup](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>).

Growing beyond one cell

Local automation does not box the site in. When more cells adopt the J1600, advanced automation adds automatic charging, come-to-me, [VDA 5050](https://info.mobilerobot.com/products/software/vda-5050/) (<https://info.mobilerobot.com/products/software/vda-5050/>), fleet management, and [API integrations](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>), so single-cell deployments can later join a coordinated multi-vendor fleet. See [Automatic Charging](https://info.mobilerobot.com/applications/scenarios/automatic-charging/) (<https://info.mobilerobot.com/applications/scenarios/automatic-charging/>) and the [J1600 overview](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>).

Who this fits

Both larger sites with many small local flows and smaller operations running one to five pallet-jack operators on a single shift — [the segments the J1600 is primarily designed for](https://info.mobilerobot.com/company/about/markets-we-serve/) (<https://info.mobilerobot.com/company/about/markets-we-serve/>). For sites where the whole facility is the changing variable, see [Brownfield Automation](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>).

Brownfield Automation

A brownfield site is an existing facility whose processes and layout were not designed around new automation. Most [warehouses](https://info.mobilerobot.com/applications/industries/warehousing/) and [factories](https://info.mobilerobot.com/applications/industries/manufacturing/) are brownfield, and their realities — changing layouts, mixed traffic, imperfect floors, no appetite for a construction project — are exactly what the J1600 is designed for.

No infrastructure, by design

The J1600 needs nothing built, mounted, or embedded:

- no tracks, wires, magnets, or reflectors;
- no building modifications;
- [Wi-Fi optional for basic use](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/);
- [no mandatory warehouse-management-system, fleet-manager, or IT integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/);
- ready to use on delivery, with typical setup in hours or one day [depending on scope](https://info.mobilerobot.com/applications/planning/deployment-scope-examples/).

Navigation is [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) on an industrial NVIDIA Jetson AI computer: the robot builds and continuously updates a three-dimensional map while an operator drives it, then localizes and plans its own routes to saved destinations. 3D mapping is designed for greater precision and reliability than traditional 2D navigation in complex or changing environments, scanning environmental structures at heights reaching up to 70 m above the vehicle.

Living with a layout that moves

Brownfield floors change: pallets appear mid-aisle, racking moves, [seasonal areas](https://info.mobilerobot.com/applications/use-cases/temporary-storage/) open and close. The J1600 absorbs this in three ways:

1. **It routes around obstacles.** The environment model updates continuously, and the robot navigates around whatever is in the way — see [Dynamic Route Changes](https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/) (<https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/>).
2. **Operators re-teach in minutes.** A moved drop point is fixed by driving there and tapping **Save location** — no automation expert, no reprogramming project. See [Temporary Location Setup](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>).
3. **A person is always in the loop.** Anything the site throws up that automation should not guess at — a blocked aisle, a damaged pallet, an improvised storage spot — is handled by immediate manual takeover. See [Handling Exceptions and Irregular Loads](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/) (<https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/>).

What the floor still has to provide

Brownfield tolerance has measured limits. Autonomous operation requires:

Requirement	Limit
Gradeability, automatic mode	0% — level floors only
Gradeability, manual mode	5% unloaded / 3% at full load
Maximum traversable bump	25 mm (1 in)
Maximum traversable gap	20 mm (0.8 in)
Floor flatness/levelness	TR34 FM3 / FF 25, FL 20
Temperature	5–40 °C (41–104 °F), indoor
Humidity	20–80%, non-condensing
Ingress protection	IP21

The company validates against rough conditions deliberately — its [Copenhagen test and demo facility](https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/) (<https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/>) uses intentionally uneven real-world flooring — but the limits above still govern deployments. Full details: [J1600 technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Incremental by nature

Brownfield automation with the J1600 starts with one flow — often a single [work cell](https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/) (<https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/>), [receiving lane](https://info.mobilerobot.com/applications/use-cases/inbound-receiving/) (<https://info.mobilerobot.com/applications/use-cases/inbound-receiving/>), or [warehouse-to-production leg](https://info.mobilerobot.com/applications/use-cases/warehouse-to-production-transport/) (<https://info.mobilerobot.com/applications/use-cases/warehouse-to-production-transport/>) — and grows point by point. Advanced automation ([automatic charging](https://info.mobilerobot.com/applications/scenarios/automatic-charging/) (<https://info.mobilerobot.com/applications/scenarios/automatic-charging/>), [come-to-me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>), [VDA 5050](https://info.mobilerobot.com/products/software/vda-5050/) (<https://info.mobilerobot.com/products/software/vda-5050/>) fleet management, APIs) is available when the application scales, never required on day one. See the [J1600 overview](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>).

Sensitive or Unstable Loads

Some loads should never be picked up on autopilot: barrels, liquid containers, top-heavy stacks, fragile goods, leaning pallets. The J1600's answer is to split the job. The operator applies experience and situational awareness during pickup and close maneuvering; the robot takes over only for the repetitive travel in between.

The manual half: judgment at the forks

In [manual mode](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>), the J1600 handles like a conventional electric pallet jack, and the operator controls every nuance:

- **Stability assessment** before lifting — recognizing a top-heavy, leaning, or poorly stacked load.
- **Condition checks** — spotting damaged pallets, crushed corners, or leaks before they travel.
- **Controlled lifting.** [Fork speeds](https://info.mobilerobot.com/products/j1600/dimensions-and-performance/) (<https://info.mobilerobot.com/products/j1600/dimensions-and-performance/>) are deliberate: 0.10 m/s lifting unloaded, 0.08 m/s lifting at full load, 0.08 m/s lowering unloaded, 0.12 m/s lowering at full load.
- **Confined maneuvering** around obstacles, other loads, and tight approaches, with pallet detection and height decisions under manual control.
- **Height where needed** — manual pick and drop up to 1,600 mm; barrels and cages at awkward positions are placed by hand.

Demonstrations of this use case show exactly this pattern with barrels: manual judgment for the sensitive part, then autonomous transport for the distance.

The autonomous half: smooth, predictable travel

Once the load is safely on the forks, the operator selects the destination, [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 autonomous leg favors stability by design:

- floor-level delivery only — the load is never dropped from height autonomously;

- [level-floor operation](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/) (https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/) (0% automatic gradeability) — no slopes or dock plates in autonomous mode;
- consistent, repeatable driving at up to 5.4 km/h with [obstacle avoidance](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/);
- a [load-detection sensor](https://info.mobilerobot.com/safety-compliance/safety-functions/load-detection/) (https://info.mobilerobot.com/safety-compliance/safety-functions/load-detection/) and speed-dependent 360-degree safety field throughout — see [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/).

The company's [Copenhagen test facility](https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/) (https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/) validates this behavior with deliberately difficult cases, including water-filled loads on uneven real-world flooring.

Supported carriers

Sensitive loads often arrive on non-standard carriers. The J1600 accepts any forkable open-base carrier within its envelope — open cages, barrels on open-base carriers, and formats beyond Euro pallets — subject to base geometry, size, stability, and operator judgment. No blanket approval exists for every carrier or for hazardous materials. See [Open Cages and Alternative Load 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/) for the exact limits.

Related reading

- The full pickup-to-delivery workflow: [Manual Pickup and Autonomous Delivery](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/).
- Every judgment call that stays human: [Handling Exceptions and Irregular Loads](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/) (https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/).
- The concept behind the split: [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/).

Open Cages and Alternative Load Carriers

The J1600 is not limited to Euro pallets. It moves any forkable carrier with an **open base — no bottom deck board** — within its size envelope: open cages, barrels on open-base carriers, and custom formats. The working rule from the company's own demonstrations: everything that is open underneath can be picked up.

Compatibility limits

Parameter	Limit / support
Base requirement	Open base with no bottom deck board, so the forks can enter
Maximum load length, including overhang	1,250 mm (49 in)
Maximum load width, including overhang	1,250 mm (49 in)
Maximum load height from floor	1,700 mm (67 in)
Maximum payload	1,600 kg (approx. 3,500 lb)
EPAL support	EPAL Euro Pallet, EPAL 3, EPAL 6
GMA support	All GMA pallets with an open base
Custom carriers	Any forkable open-base carrier within the size limits

The exact envelope is 1,250 mm; some shorter product summaries round it to 1.2 m. Use 1,250 mm when checking a carrier.

Fork geometry

Whether a custom carrier is forkable depends on its base openings matching the fork dimensions:

Fork parameter	Value
Fork length	1,150 mm (45 in)
Fork width, each	180 mm (7 in)
Fork thickness	60 mm (2.4 in)
Outer distance across forks	680 mm (27 in)
Inner distance between forks	320 mm (13 in)
Lowest fork height	90 mm (3.5 in)
Highest fork position (manual)	1,600 mm (63 in)

Full dimensions: [J1600 technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (https://info.mobilerobot.com/products/j1600/technical-specifications/).

Judgment still applies

Compatibility depends on base geometry, size, stability, and operator judgment — there is 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/) covering every carrier or any hazardous material. The operator assesses each carrier and load before pickup, which is one reason pallet pickup is always manual on the J1600. Unstable or awkward carriers get the treatment described in [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/).

AUTONOMOUS DELIVERY IS FLOOR LEVEL

Whatever the carrier, autonomous delivery is at floor level. The 1,600 mm pick and drop height is a manual-mode capability.

Where alternative carriers show up

Open cages and non-standard carriers are common in [production supply](https://info.mobilerobot.com/applications/use-cases/production-supply/) (https://info.mobilerobot.com/applications/use-cases/production-supply/), (component cages to the line), [inbound receiving](https://info.mobilerobot.com/applications/use-cases/inbound-receiving/) (https://info.mobilerobot.com/applications/use-cases/inbound-receiving/), (mixed inbound formats), and [grocery/FMCG distribution](https://info.mobilerobot.com/applications/industries/grocery-and-fmcg/) (https://info.mobilerobot.com/applications/industries/grocery-and-fmcg/), using GMA-format pallets. Because a carrier only needs to pass the envelope check once, alternative formats flow through [multi-point](https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/) (https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/), and [cross-docking](https://info.mobilerobot.com/applications/use-cases/cross-docking/) (https://info.mobilerobot.com/applications/use-cases/cross-docking/), tasks like any Euro pallet.

For questions on specific carriers, see the [product and capabilities FAQ](https://info.mobilerobot.com/support/faq/product-and-capabilities/) (https://info.mobilerobot.com/support/faq/product-and-capabilities/).

Multi-Point Pallet Transport

Real pallet flows are rarely a single A-to-B shuttle. Goods move from several origins to several destinations, and the mix changes daily. The J1600 handles this as multi-point-to-multi-point transport: every saved location can pair with every other, without demonstrating each combination.

The location model

- A location is created by driving the J1600 to the point manually and tapping **Save location**.
- There is no software limit on the number of [saved locations](https://info.mobilerobot.com/documentation/user-guides/location-management/) — practical limits come from available floor space.
- The robot navigates to any saved point from wherever it is. You do not teach routes between pairs; you teach points, and the [3D LiDAR SLAM navigation](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) plans each route itself.

That last property is what separates [teach-and-repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) points from fixed-route automation: ten saved points already give you every pairing among them. See [Temporary Location Setup](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) and [Dynamic Route Changes](https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/).

Task patterns for multi-point work

Pattern	Behavior	Typical use
Deliver and return	Drop at B, come back to A	Repetitive feeding loops — see Deliver and Return (https://info.mobilerobot.com/applications/scenarios/deliver-and-return/)
A-to-B-to-C	Drop at B, continue empty to C	Chained flows, repositioning — see A-to-B-to-C Transport (https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/)
Deliver and wait	Drop at B, stay there	Staging lanes — see Deliver and Wait (https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/)
Deliver and park	Drop at B, go to parking	End of a run — see Deliver and Park (https://info.mobilerobot.com/applications/scenarios/deliver-and-park/)
Come-to-me	Robot comes to the caller	On-demand pickup — see Come-to-Me (https://info.mobilerobot.com/applications/scenarios/come-to-me/)

Each task starts the same way: manual pickup, destination and post-delivery behavior chosen on the touchscreen, autonomous mode confirmed with the physical start button. See [Manual Pickup and Autonomous Delivery](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>).

Where multi-point flows pay off

- **[Cross-docking](https://info.mobilerobot.com/applications/use-cases/cross-docking/)** (<https://info.mobilerobot.com/applications/use-cases/cross-docking/>): shuffling pallets across multiple doors and lanes is the defining multi-point application.
- **[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/>): lines, buffers, and storage zones form a many-to-many network.
- **[Temporary storage](https://info.mobilerobot.com/applications/use-cases/temporary-storage/)** (<https://info.mobilerobot.com/applications/use-cases/temporary-storage/>): short-lived points join and leave the network without touching anything else.
- **Changing operations:** when flows change, you add points, not projects — a fit described in [Brownfield Automation](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>).

Capacity and limits

Each trip moves up to 1,600 kg at up to 5.4 km/h on indoor, level routes, dropping at floor level. Carriers must be open-base within 1,250 × 1,250 mm including overhang — see [Open Cages and Alternative Load 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/>) and the [J1600 technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Operating Scenarios

The task patterns and day-to-day operating situations the J1600 supports, from manual pickup with autonomous delivery to automatic charging and exception handling.



Manual Pickup and Autonomous Delivery

The J1600's core operating pattern step by step — pick the pallet manually, create the task on the touchscreen, confirm autonomous mode, and let the robot deliver.



Deliver and Return

The J1600's boomerang task — autonomous delivery to a saved point followed by an automatic return to the origin or operator, ideal for repetitive feeding loops.



Deliver and Wait

The J1600's drop-and-wait task — the robot delivers the pallet at floor level and remains at the destination until the operator gives it new work.



Deliver and Park

The J1600's deliver-and-park task — after the floor-level drop, the robot proceeds to a defined parking location, keeping floors clear between jobs.



A-to-B-to-C Transport

The J1600's simple ABC task — deliver a pallet from A to B, then continue autonomously to C, chaining saved locations into a flow.



Come-to-Me

Calling the J1600 to your location from a mobile app or web interface — the come-to-me function turns the robot into on-demand transport.



Automatic Charging

How the J1600 charges itself at the optional automatic charging station, plus manual charging, battery drain and charge rates, and list prices for both chargers.



Temporary Location Setup

Adding a new J1600 destination in minutes — drive to the point, tap Save Location, name it, and start sending pallets. No code, no limit on saved locations.



Dynamic Route Changes

How the J1600 handles route changes — it plans its own paths between saved points, routes around new obstacles, and lets operators re-teach destinations in minutes.



Mixed Manual and Autonomous Work

Running the J1600 as one tool for both jobs — manual pallet-jack work and autonomous transport in the same shift, with instant handover in both directions.



Operation in Crowded Environments

How the J1600 operates safely among people and traffic — 360-degree protective field, speed-dependent safety zones, blue light indication, and manual takeover.



Handling Exceptions and Irregular Loads

The exceptions the J1600 leaves to people by design — damaged pallets, unstable loads, wrap snags, misplaced pallets, dock plates, congestion, and urgent changes.

Manual Pickup and Autonomous Delivery

Every J1600 task follows the same core pattern: a person picks up the pallet manually, and the robot delivers it autonomously. Pickup is always manual — that is where judgment lives — and autonomous delivery is always at floor level. This page walks through the pattern that every other scenario builds on.

The workflow

1. Manually pick up a supported pallet or load carrier, [using the tiller](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>), like a conventional electric pallet jack.
2. Open task creation on the 15-inch touchscreen.
3. Choose the task type and the saved drop destination.
4. Choose what happens after delivery: 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](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/>); confirm with the physical LED start/resume button.
7. The interface instructs you to step away. Do so.
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.

The route can be a few meters or well over 100 meters — the concept is identical.

Mode indication and control

- White lights indicate manual mode; in automatic mode, blue light strips display the protected area around the vehicle.
- 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.
- Grab or move the tiller at any time to take back manual control immediately. Emergency-stop buttons and the tiller-position switches stop the vehicle — see

[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/>).

Why pickup stays manual

Fork placement, load stability, pallet condition, and tight approaches are judgment work. Keeping them manual is what lets the J1600 skip the integration, infrastructure, and controlled processes that full automation needs — the reasoning behind [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/>). Loads that need extra care get the treatment in [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/>).

How quickly a new operator learns this

[Training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>) takes about 30 minutes for someone who already operates an electric pallet jack. At a public test event, [a first-time user drove the J1600 manually](https://info.mobilerobot.com/applications/customer-stories/video-case-stories/) (<https://info.mobilerobot.com/applications/customer-stories/video-case-stories/>), saved a location, created a drop-and-return task, confirmed automatic mode, and watched the robot navigate around people — on first contact with the machine.

Variations on the pattern

The post-delivery choice in step 4 is what differentiates the [named task patterns](https://info.mobilerobot.com/documentation/user-guides/task-management/) (<https://info.mobilerobot.com/documentation/user-guides/task-management/>):

- [Deliver and Return](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>) — the most common task
- [Deliver and Wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/>)
- [Deliver and Park](https://info.mobilerobot.com/applications/scenarios/deliver-and-park/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-park/>)
- [A-to-B-to-C Transport](https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/) (<https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/>)
- [Come-to-Me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>) — the robot comes to you first

Destinations are created as described in [Temporary Location Setup](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>). For the machine's full capabilities, see the [J1600 overview](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>).

Deliver and Return

Deliver and return — also called the **boomerang** task — sends the J1600 to a saved destination, drops the pallet at floor level, and brings the vehicle straight back to the origin or operator. It is the most commonly performed and demonstrated J1600 task, because it turns one operator plus one robot into a continuous loop.

How it works

1. Pick up the pallet manually.
2. Choose the saved drop destination on the touchscreen.
3. Choose **return to origin/operator** as the post-delivery behavior.
4. Confirm automatic mode with the start button and step away.
5. The robot delivers, drops at floor level, and returns empty to where it started.

While the robot is out, the operator prepares the next pallet. When it returns, the next cycle starts immediately — drop, go, repeat. The full task mechanics are described in [Manual Pickup and Autonomous Delivery](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>).

Where the loop fits

The boomerang suits any flow where pallets keep leaving the same place:

- **Inbound receiving** (<https://info.mobilerobot.com/applications/use-cases/inbound-receiving/>): the operator stays at the trailer; the robot shuttles each pallet to inspection or storage and comes back.
- **Production supply** (<https://info.mobilerobot.com/applications/use-cases/production-supply/>): the kitting or supermarket operator loads; the robot feeds the line and returns.
- **Production-to-shipping** (<https://info.mobilerobot.com/applications/use-cases/production-to-shipping-transport/>): the line-end operator keeps packing while finished pallets flow to staging.
- **Buffer feeding** (<https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/>): a steady loop keeps a buffer at level without anyone walking.

The longer the leg, the more [walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) each loop removes — the route can be a few meters or well over 100 meters.

Behavior on the way

On both the loaded outbound leg and the empty return, the robot navigates with [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) at up to 5.4 km/h, avoids obstacles, and protects its surroundings with a speed-dependent 360-degree safety field shown by blue light strips. The 2D safety LiDARs and certified safety functions support both forward and reverse travel — see [Operation in Crowded Environments](https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/).

Alternatives

If the vehicle should stay at the destination instead of returning, use [Deliver and Wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/). If it should clear the floor after the last drop, use [Deliver and Park](https://info.mobilerobot.com/applications/scenarios/deliver-and-park/). To chain a second leg instead of returning, use [A-to-B-to-C Transport](https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/).

Deliver and Wait

Deliver and wait — also called **drop and wait** — sends the J1600 to a saved destination, drops the pallet at floor level, and keeps the vehicle standing at that point until someone gives it a new task. Use it when the work continues at the destination, or when the next move is not yet known.

How it works

1. Pick up the pallet manually.
2. Choose the saved drop destination on the touchscreen.
3. Choose **Stop and wait** as the post-delivery behavior.
4. Confirm automatic mode with the start button and step away.
5. The robot delivers, drops, and waits at the destination.

From there, anyone at the destination can start the next task from the touchscreen, or simply take the tiller and continue manually — the handover works in both directions. See [Manual Pickup and Autonomous Delivery](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) for the base workflow and [Mixed Manual and Autonomous Work](https://info.mobilerobot.com/applications/scenarios/mixed-manual-and-autonomous-work/) (https://info.mobilerobot.com/applications/scenarios/mixed-manual-and-autonomous-work/) for the mode change.

A demonstrated example

In a [public tutorial](https://info.mobilerobot.com/newsroom/videos/how-to-videos/) (https://info.mobilerobot.com/newsroom/videos/how-to-videos/), a location was saved and named `pallet1` ("Pallet Bay 1"), a task was created with **Drop Pallet at Location** and stop-and-wait selected, automatic mode was confirmed, and the robot delivered and stayed put. Creating the location and the task took minutes — see [Temporary Location Setup](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/).

When waiting beats returning

- **Staging lanes:** the pallet may need repositioning once the lane fills — keep the vehicle where the action is. See [Buffer and Staging Management](https://info.mobilerobot.com/applications/scenarios/staging-management/) (https://info.mobilerobot.com/applications/scenarios/staging-management/).

[obot.com/applications/use-cases/buffer-and-staging-management/](https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/)).

- **Handovers between teams:** the receiving team sends; the production team takes over the waiting vehicle at their end.
- **One-way flows:** when nobody is left at the origin, returning empty would waste the trip.
- **Uncertain next steps:** in changing flows such as [cross-docking](https://info.mobilerobot.com/applications/use-cases/cross-docking/) (<https://info.mobilerobot.com/applications/use-cases/cross-docking/>), the next origin is often decided after the drop.

If the vehicle should come back for the next pallet instead, use [Deliver and Return](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>). If it should clear the area after the drop, use [Deliver and Park](https://info.mobilerobot.com/applications/scenarios/deliver-and-park/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-park/>) or chain a leg with [A-to-B-to-C Transport](https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/) (<https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/>). A waiting robot can also be summoned from elsewhere with [Come-to-Me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>).

While it waits

A waiting J1600 draws [approximately 2% battery per hour in standby](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/>), so parking it at a destination between tasks costs little runtime. For charge management across a shift, see [Automatic Charging](https://info.mobilerobot.com/applications/scenarios/automatic-charging/) (<https://info.mobilerobot.com/applications/scenarios/automatic-charging/>).

Deliver and Park

Deliver and park completes the drop and then sends the J1600 to a defined parking location. Use it at the end of a run, between shifts, or whenever the vehicle should clear the working area instead of standing at the destination or returning empty.

How it works

1. Pick up the pallet manually.
2. Choose the saved drop destination on the touchscreen.
3. Choose **go to parking** as the post-delivery behavior.
4. Confirm automatic mode with the start button and step away.
5. The robot delivers, drops at floor level, and drives itself to the parking location.

The parking spot is a [saved location](https://info.mobilerobot.com/documentation/user-guides/location-management/) like any other — created once by driving there and tapping **Save location**. See [Temporary Location Setup](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) and the base workflow in [Manual Pickup and Autonomous Delivery](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/).

Why park

- **Clear floors:** staging lanes, dock areas, and line-side spaces stay free of an idle vehicle — useful in the crowded conditions described in [Operation in Crowded Environments](https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/).
- **Predictable pickup point:** the next operator always knows where the machine is.
- **End-of-shift discipline:** the last task of the day ends with the vehicle parked, not abandoned mid-floor.
- **Charging:** park near the charger for a manual plug-in during breaks, or combine parking behavior with an automatic charging station so idle time becomes charge time — see [Automatic Charging](https://info.mobilerobot.com/applications/scenarios/automatic-charging/).

A parked J1600 draws approximately 2% battery per hour in standby (<https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/>).

Calling it back

A parked robot does not need to be fetched on foot. With the come-to-me function, call it to your location from a mobile app or web interface — see [Come-to-Me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>). Otherwise, any operator can walk over, take the tiller, and start the next task.

Alternatives

To keep a loop running, use [Deliver and Return](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>). To keep the vehicle at the destination, use [Deliver and Wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/>). Parking can also be the final leg of a chained task — see [A-to-B-to-C Transport](https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/) (<https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/>).

A-to-B-to-C Transport

The **simple ABC** task delivers a pallet from A to B and then sends the J1600 onward to a third point, C. It is the building block for chained flows: the vehicle ends each job where the next one starts, instead of returning to where the last one began.

How it works

1. Pick up the pallet manually at A.
2. Choose saved destination B on the touchscreen.
3. Choose **go to another point** as the post-delivery behavior and select C.
4. Confirm automatic mode with the start button and step away.
5. The robot delivers at B, drops at floor level, and continues empty to C.

C can be anything useful: the next pickup area, a parking spot, or a charging station. See [Manual Pickup and Autonomous Delivery](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) for the base workflow.

What ABC unlocks

- **Chained flows:** warehouse to line, then onward to the next pickup — the robot pre-positions itself where work continues. See [Warehouse-to-Production Transport](https://info.mobilerobot.com/applications/use-cases/warehouse-to-production-transport/) (https://info.mobilerobot.com/applications/use-cases/warehouse-to-production-transport/).
- **Two-ended operations:** deliver finished goods to shipping, then continue to the receiving area where inbound work is waiting — one vehicle serving both flows. See [Production-to-Shipping Transport](https://info.mobilerobot.com/applications/use-cases/production-to-shipping-transport/) (https://info.mobilerobot.com/applications/use-cases/production-to-shipping-transport/) and [Inbound Receiving](https://info.mobilerobot.com/applications/use-cases/inbound-receiving/) (https://info.mobilerobot.com/applications/use-cases/inbound-receiving/).
- **Repositioning without walking:** whoever needs the vehicle next does not fetch it; it arrives.
- **Charging in the flow:** end a run at the automatic charging station so idle minutes become charge — see [Automatic Charging](https://info.mobilerobot.com/applications/scenarios/automatic-charging/) (https://info.mobilerobot.com/applications/scenarios/automatic-charging/).

Points, not routes

A, B, and C are [saved locations](https://info.mobilerobot.com/documentation/user-guides/location-management/) (<https://info.mobilerobot.com/documentation/user-guides/location-management/>), and any saved location can play any role in any task. Because the J1600 plans its own route between points with [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>), ten locations already support every A-B-C combination among them — nothing is taught per combination. This is the same property behind [Multi-Point Pallet Transport](https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/) (<https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/>) and [cross-docking](https://info.mobilerobot.com/application/s/use-cases/cross-docking/) (<https://info.mobilerobot.com/application/s/use-cases/cross-docking/>); creating the points takes minutes each, per [Temporary Location Setup](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>).

Alternatives

- Vehicle should come back to A: [Deliver and Return](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>).
- Vehicle should stay at B: [Deliver and Wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/>).
- C is specifically the parking location: [Deliver and Park](https://info.mobilerobot.com/applications/scenarios/deliver-and-park/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-park/>).
- The robot should come to a person on demand: [Come-to-Me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>).

Come-to-Me

Come-to-me reverses the usual direction of a task: instead of sending the robot away with a pallet, you call it to where you are. The request comes from a mobile app or web interface, and the J1600 drives itself to you — no one walks across the building to fetch it.

How it works

1. Open the mobile app or web interface.
2. Call the robot to your location.
3. The J1600 plans its route with [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>), drives over autonomously, and arrives ready for work.
4. Take the tiller for manual pickup, or create the next task on the touchscreen.

Come-to-me is an **advanced automation** function, alongside [automatic charging](https://info.mobilerobot.com/applications/scenarios/automatic-charging/) (<https://info.mobilerobot.com/applications/scenarios/automatic-charging/>), [VDA 5050](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/) (<https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/>), fleet management, and [API integrations](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>). Basic automation — on-screen tasks, saved locations, autonomous floor drop, return-to-me, and parking — works without it. See the [J1600 overview](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>) for the capability levels.

What it changes on the floor

- **Pull-based replenishment:** a line-side worker calls the robot when material is needed; the warehouse loads it; the line receives it. See [Production Supply](https://info.mobilerobot.com/applications/use-cases/production-supply/) (<https://info.mobilerobot.com/applications/use-cases/production-supply/>).
- **No dead-heading on foot:** a robot left waiting or parked elsewhere — after a [Deliver and Wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/>) or [Deliver and Park](https://info.mobilerobot.com/applications/scenarios/deliver-and-park/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-park/>) task — is summoned instead of collected.
- **Shared vehicle, many users:** in a facility with several pickup areas, whoever needs transport next calls it, which suits the one-tool pattern described in [Mixed Manual and Autonomous Work](https://info.mobilerobot.com/applications/scenarios/mixed-manual-and-autonomous-work/) (<https://info.mobilerobot.com/applications/scenarios/mixed-manual-and-autonomous-work/>).

[-manual-and-autonomous-work/](#)) and [Local Work-Cell Automation](#) (<https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/>).

On the way to you

The empty vehicle travels like [any autonomous run](#) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>): up to 5.4 km/h, obstacle avoidance, speed-dependent 360-degree safety field with blue light strips showing the protected area. See [Operation in Crowded Environments](#) (<https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/>) and [how J1600 safety works](#) (<https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/>).

Your position must be reachable as a destination on [indoor, level floors](#) (<https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/>) — automatic mode has 0% gradeability, so the robot will not climb a ramp to reach you.

Related scenarios

Once the robot arrives, work continues with the standard pattern in [Manual Pickup and Autonomous Delivery](#) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>). Frequently used calling points can be saved as locations for regular tasks too — see [Temporary Location Setup](#) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>).

Automatic Charging

With the optional [automatic charger](https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/) (<https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/>), the J1600 keeps itself charged: it drives to the station, positions itself at the charger, and a charging interface extends to the charging plates on the vehicle. Idle minutes become charge — opportunity charging without anyone plugging in a cable.

How automatic charging works

1. The robot drives to the charging station and positions itself in front of the charger.
2. The charging interface extends from the station to the vehicle's charging plates.
3. Charging runs while the robot is not busy; the vehicle is available for work again when needed.

Automatic charging is an **advanced automation** capability, alongside come-to-me, [VDA 5050](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/) (<https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/>), fleet management, and [API integrations](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>). When the automatic charger is purchased with the [installation and commissioning package](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>), its setup is part of on-site Day 1.

The [charging-current relay](https://info.mobilerobot.com/safety-compliance/safety-functions/charging-safety/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/charging-safety/>) is a certified safety function rated Performance Level b — see [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/>).

Manual charging

Without the automatic station, charging works like any electric pallet jack: plug in the [manual charger](https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/) (<https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/>) during a break or whenever the machine is idle — before lunch, between waves, at shift end. Combining a manual charger with a saved parking spot near it keeps the routine simple — see [Deliver and Park](https://info.mobilerobot.com/applications/scenarios/deliver-and-park/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-park/>).

Battery, drain, and charge rates

Parameter	Value
Battery	24 V, 200 Ah lithium iron phosphate (LiFePO4)
Charging rate	approx. 47 percentage points per hour
Drain, driving fully loaded	approx. 13% per hour
Drain, driving unloaded	approx. 12% per hour
Drain, standby	approx. 2% per hour

Runtime exceeds eight hours in a typical duty cycle. The [drain rates](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/>) imply roughly 7.7 hours of continuous fully loaded driving or 8.3 hours unloaded, but these are calculated figures — not guaranteed runtimes — before allowing for standby, lifting, duty cycle, battery reserve, and operating conditions. For a single-shift operation, a break-time plug-in or an opportunity-charging station comfortably covers the day.

Fitting charging into task flows

- End a run at the charger with [Deliver and Park](https://info.mobilerobot.com/applications/scenarios/deliver-and-park/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-park/>) or as the final leg of an [A-to-B-to-C task](https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/) (<https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/>).
- A waiting robot ([Deliver and Wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/>)) burns only ~2% per hour, so short waits rarely need a charge stop.
- Call the robot off the charger when work resumes with [Come-to-Me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>).

Charger list prices

Item	End-user list price (2026)
Manual charger	€3,600
Automatic charger	€8,400

Full electrical specifications: [J1600 technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>). For charger questions, see the [product and capabilities FAQ](https://info.mobilerobot.com/support/fag/product-and-capabilities/) (<https://info.mobilerobot.com/support/fag/product-and-capabilities/>).

Temporary Location Setup

Adding a destination to the J1600 takes minutes and no expertise: drive there, tap **Save location**, name it, done. This is the mechanism behind every [flexible use](https://info.mobilerobot.com/applications/results/operational-flexibility/) of the machine — temporary storage, moved staging lanes, new work cells, seasonal areas — because a location that costs minutes to create can be treated as disposable.

Saving a location

1. Use the tiller to drive the J1600 manually to the desired point. It handles like a regular electric pallet jack, and the robot continuously learns and updates its 3D map while you drive.
2. Tap **Save location** on the touchscreen.
3. Name the point — for example `pallet1` or "Pallet Bay 1", as shown in the company's [public tutorial](https://info.mobilerobot.com/newsroom/videos/how-to-videos/).
4. Repeat for as many points as the operation needs.

There is **no software limit** on the number of [saved locations](https://info.mobilerobot.com/documentation/user-guides/location-management/); the practical limit is available floor space.

Using the new location

The point is immediately available in task creation: choose it as a drop destination, pair it with any post-delivery behavior, and execute — the full workflow is in [Manual Pickup and Autonomous Delivery](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/). Because the robot plans routes itself, the new point works with every existing location at once; nothing is retaught pair by pair. See [Dynamic Route Changes](https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/).

First-time setup is the same operation

[Commissioning a J1600](https://info.mobilerobot.com/documentation/getting-started/first-time-setup/) is this procedure repeated: power on, follow the on-screen tutorial, [drive the](#)

[facility so the robot maps it](https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/) (<https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/>), and save each destination. No tracks, wires, reflectors, or building modifications are involved, and [Wi-Fi is optional for basic use](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>). [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/>). The optional five-day installation and commissioning package includes creation of up to 25 validated [drop points](https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/) (<https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/>) — see the [J1600 overview](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>).

Why operators own this

[Teaching routes](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>) is one of the jobs the company deliberately keeps human: driving to a new point and saving it replaces calling an automation expert to reprogram a map. That is what makes the J1600 practical in [brownfield sites](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>), [temporary storage](https://info.mobilerobot.com/applications/use-cases/temporary-storage/) (<https://info.mobilerobot.com/applications/use-cases/temporary-storage/>), [changing buffers](https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/) (<https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/>), and [cross-docking lanes](https://info.mobilerobot.com/applications/use-cases/cross-docking/) (<https://info.mobilerobot.com/applications/use-cases/cross-docking/>) — layouts change, and the person on the floor keeps up. It is central to [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/>).

Placement requirements

A drop location must be on the [indoor, level portion of the facility](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/) (<https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/>): automatic gradeability is 0%, floors to TR34 FM3, bumps up to 25 mm, gaps up to 20 mm, temperature 5–40 °C. See the [J1600 technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Dynamic Route Changes

The J1600 does not follow fixed routes. It navigates to saved points, planning and re-planning its own path with [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>). When the floor changes — an obstacle appears, a lane moves, a whole area is rearranged — the response is automatic re-routing, a minute of [re-teaching](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>), or a human hand on the tiller, depending on the scale of the change.

Three layers of adaptation

1. The robot re-routes itself

The J1600 builds and continuously updates a three-dimensional map of the environment, scanning structures at heights reaching up to 70 m above the vehicle. It detects obstacles and drives around them in dynamic environments, so everyday changes — a pallet left in the aisle, a parked cart — do not require anyone to do anything. 3D mapping is designed for greater precision and reliability than traditional 2D navigation in complex or changing conditions.

Because navigation is point-based, the robot reaches any saved destination without having been taught every possible origin-destination combination. Preferred travel zones can be defined to keep autonomous traffic in safer corridors.

2. The operator re-teaches in minutes

When a destination itself moves — a staging lane shifts, a buffer opens somewhere new — the operator drives to the new point and taps **Save location**. No automation expert, no reprogramming project, no limit on saved locations. See [Temporary Location Setup](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>).

3. The human takes over

For changes that need judgment right now — a blocked area to improvise around, an urgent reprioritization — the operator grabs the tiller and drives. Route changes and crowded-floor improvisation are among the jobs deliberately kept human. See

[Handling Exceptions and Irregular Loads](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/) (<https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/>) and [Mixed Manual and Autonomous Work](https://info.mobilerobot.com/applications/scenarios/mixed-manual-and-autonomous-work/) (<https://info.mobilerobot.com/applications/scenarios/mixed-manual-and-autonomous-work/>).

No infrastructure to move

Fixed-route automation embeds its routes in the building — tracks, wires, magnets, reflectors. The J1600 uses none of these, so a layout change never means construction work. This is the core of its fit for [brownfield sites](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>), [cross-docking](https://info.mobilerobot.com/applications/use-cases/cross-docking/) (<https://info.mobilerobot.com/applications/use-cases/cross-docking/>), and [temporary storage](https://info.mobilerobot.com/applications/use-cases/temporary-storage/) (<https://info.mobilerobot.com/applications/use-cases/temporary-storage/>).

Safety while re-routing

Obstacle avoidance belongs to the navigation stack; [personnel protection is separate and certified](https://info.mobilerobot.com/safety-compliance/safety-overview/navigation-sensor-s-vs-safety-sensors/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/navigation-sensor-s-vs-safety-sensors/>). Two 2D safety LiDARs, an independent safety controller, and a speed-dependent 360-degree protective field guard every route the robot chooses, with [person detection](https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/>) and [braking](https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/braking/>) assigned Performance Level d. See [Operation in Crowded Environments](https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/) (<https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/>) and [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/>).

Limits

Re-routing happens within the operating envelope: [indoor, level floors](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/) (<https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/>) (0% automatic gradeability), bumps up to 25 mm, gaps up to 20 mm, floors to TR34 FM3. No figures are published for minimum aisle width or localization tolerance — for site-specific feasibility, see the [product and capabilities FAQ](https://info.mobilerobot.com/support/faq/product-and-capabilities/) (<https://info.mobilerobot.com/support/faq/product-and-capabilities/>) and the [J1600 technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Mixed Manual and Autonomous Work

The J1600 is one vehicle for two kinds of work. In the same shift — often in the same minute — it is a familiar manual pallet jack and an autonomous transporter. Mixing the modes freely, rather than choosing one, is how the machine earns its keep: judgment stays manual, distance goes autonomous.

The two modes

- **Manual mode:** a person controls the tiller and lift functions like a conventional electric pallet jack — nuanced pickup, handling up to 1,600 mm, difficult approaches, [sensitive loads](https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/) (<https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/>), exceptions. White lights indicate manual mode.
- **Automatic mode:** after the operator selects a saved destination and confirms the [mode change](https://info.mobilerobot.com/documentation/getting-started/manual-and-autonomous-modes/) (<https://info.mobilerobot.com/documentation/getting-started/manual-and-autonomous-modes/>), the vehicle [drives itself](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>), drops at floor level, and follows its configured return, park, wait, or continue behavior. Blue light strips show the protected area.

This is [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>), the product's defining distinction.

Switching between modes

Into automatic: create or select the task on the touchscreen, execute, confirm with the physical LED start/resume button when the robot asks, and step clear when instructed.

Back to manual: grab or move the tiller — takeover is immediate. Tiller-position switches handle emergency stop and manual control, and a three-position key switch selects power off, manual only, or automatic mode. Safety controls are always available — see [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/>).

The full task workflow is in [Manual Pickup and Autonomous Delivery](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>).

A mixed shift in practice

A [receiving](https://info.mobilerobot.com/applications/use-cases/inbound-receiving/) operator's morning might look like this:

1. **Manual:** unload the trailer over the dock plate — [manual mode](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) handles gradients up to 5% unloaded, 3% loaded; automatic mode is level-floor only.
2. **Autonomous:** send each pallet to storage with [deliver and return](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) while staying at the dock.
3. **Manual:** an awkward, part-damaged pallet gets hand-carried treatment — see [Handling Exceptions and Irregular Loads](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/).
4. **Autonomous:** the last pallet goes out with [deliver and park](https://info.mobilerobot.com/applications/scenarios/deliver-and-park/), leaving the vehicle at the charger.

One tool covers the whole sequence — no switching vehicles, no idle specialist machine. This one-tool utilization also suits [local work cells](https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/) and small teams where the same one to five operators do everything.

Why not full automation

Removing the manual half entirely would require [systems integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/), controlled processes, and expert configuration — and would still stall on the exceptions a person handles in seconds. Keeping the operator in the loop targets most of the [productivity gain](https://info.mobilerobot.com/applications/results/productivity-improvements/) at a fraction of the complexity; the reasoning is laid out in [human-in-the-loop automation](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/). [Training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) for the mixed role takes about 30 minutes for an existing pallet-jack operator.

Operation in Crowded Environments

Warehouse floors are shared spaces: people walking, pallet jacks crossing, freight staged where it fits. The J1600 is built to run autonomously in this traffic — with a certified protective field around the vehicle — and to hand the really chaotic moments back to a person.

The protective field

- A **360-degree safety field** surrounds the vehicle, supporting both forward and reverse autonomous travel.
- Two **2D safety LiDAR scanners**, front and rear, provide certified [personnel detection](https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) — [separate from the 3D navigation LiDAR and RGB AI camera](https://info.mobilerobot.com/safety-compliance/safety-overview/navigation-sensors-vs-safety-sensors/), which belong to the navigation stack.
- The field is **speed-dependent**: it expands as travel speed increases and adjusts as the vehicle slows.
- **Blue light strips** project the current protected area onto the floor, so people nearby can see the zone at a glance. White lights mean the vehicle is in manual mode.

Person detection in the safety field and the [braking system](https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) are rated [Performance Level d](https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/); [safety-field size adjustment](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) is also PL d. An independent safety controller, three emergency-stop buttons, a belly button for stop-and-reverse, and certified motor controllers and encoders complete the architecture — see [how J1600 safety works](https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/).

Navigating around people

At a public test event, [a first-time user sent the J1600 on a delivery](https://info.mobilerobot.com/applications/customer-stories/video-case-stories/) and watched it route around people on its way — standard behavior, not a stunt. The [3D LiDAR SLAM navigation](#)

[ps://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/)) continuously updates its environment model and drives around obstacles, moving or static, at up to 5.4 km/h. Preferred travel zones can be defined to keep autonomous traffic in safer corridors through busy production areas. See [Dynamic Route Changes](https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/) (<https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/>).

Before [any autonomous run](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>) starts, the operator [confirms the mode change](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/>) and the robot instructs them to step away — autonomy never starts by surprise.

When crowded becomes chaotic

There is a difference between traffic and gridlock. An overflowing receiving area with no clear lane is a job for human improvisation: take the tiller — takeover is immediate — and [drive the pallet through manually](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>). Navigating genuinely cluttered floors is one of the jobs deliberately kept human; see [Handling Exceptions and Irregular Loads](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/) (<https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/>) and [Mixed Manual and Autonomous Work](https://info.mobilerobot.com/applications/scenarios/mixed-manual-and-autonomous-work/) (<https://info.mobilerobot.com/applications/scenarios/mixed-manual-and-autonomous-work/>).

Where this matters most

- [Cross-docking](https://info.mobilerobot.com/applications/use-cases/cross-docking/) (<https://info.mobilerobot.com/applications/use-cases/cross-docking/>) floors with staged freight and constant movement
- [Inbound receiving](https://info.mobilerobot.com/applications/use-cases/inbound-receiving/) (<https://info.mobilerobot.com/applications/use-cases/inbound-receiving/>) during unloading peaks
- [Production areas](https://info.mobilerobot.com/applications/use-cases/production-supply/) (<https://info.mobilerobot.com/applications/use-cases/production-supply/>) where autonomous traffic shares corridors with line workers
- Outbound [staging](https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/) (<https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/>) as shipping waves build

No stopping-distance curves or safety-distance tables are published; current product documentation applies to deployment decisions. The layered design is intended to make transport more predictable and may [reduce workplace accidents](https://info.mobilerobot.com/applications/results/safety-improvements/) (<https://info.mobilerobot.com/applications/results/safety-improvements/>), compared with manual pallet handling.



Handling Exceptions and Irregular Loads

Warehouses are messy, dynamic, and unpredictable. The J1600 is designed around that fact: instead of treating every irregularity as a system error, it keeps a person in the loop who handles exceptions in seconds. This page lists the situations where the human half of [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) does its best work.

The exception list

1. **Damaged pallets.** A broken bottom board or protruding nail is spotted before it becomes a safety hazard or a jam.
2. **Unstable loads.** A top-heavy, leaning, or poorly stacked load gets a judgment call before lifting — and manual handling if needed. See [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/>).
3. **Plastic-wrap snags.** A loose shrink-wrap tail is seen and tucked away before it catches a rack or doorframe.
4. **Misplaced pallets.** A pallet that is not exactly where the system expects is found by looking around — not reported as an error and abandoned.
5. **Damaged goods.** Leaks and crushed corners are caught before delivery to a customer or a production line.
6. **Steep dock plates.** Bumps, slopes, and trailer misalignment are manual work: automatic-mode gradeability is 0%, while [manual mode](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>) handles up to 5% unloaded and 3% at full load. See [Inbound Receiving](https://info.mobilerobot.com/applications/use-cases/inbound-receiving/) (<https://info.mobilerobot.com/applications/use-cases/inbound-receiving/>).
7. **Crowded floors.** An overflowing or cluttered area is crossed by improvising a safe route manually. See [Operation in Crowded Environments](https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/) (<https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/>).
8. **Urgent reprioritization.** When a production line is starving, the operator redirects immediately — no queue, no ticket. See [Production Supply](https://info.mobilerobot.com/applications/use-cases/production-supply/) (<https://info.mobilerobot.com/applications/use-cases/production-supply/>).
9. **Route and layout changes** (<https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/>). A new point is taught by driving there and tapping **Save location** — see [Temporary Location Setup](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>).

10. **Avoiding automation overhead.** Exceptions are the reason full automation gets expensive; handling them manually is what keeps the J1600 simple. The design targets [up to 80% of the repetitive-transport gain](https://info.mobilerobot.com/applications/results/productivity-improvements/) (<https://info.mobilerobot.com/applications/results/productivity-improvements/>) without the [integration burden](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>).

These are the company's design arguments — advocacy examples rather than comparative test results — and they explain the division of work 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/>).

How takeover actually works

Exception handling relies on the handover being effortless in both directions:

- **To manual:** grab or move the tiller and the vehicle is immediately under manual control. Emergency-stop buttons, tiller-position switches, and the key switch (power off / manual only / automatic) are always available. See [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/>).
- **Back to autonomous:** once the exception is cleared, select the task, confirm with the start button, and step away. See [Manual Pickup and Autonomous Delivery](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>) and [Mixed Manual and Autonomous Work](https://info.mobilerobot.com/applications/scenarios/mixed-manual-and-autonomous-work/) (<https://info.mobilerobot.com/applications/scenarios/mixed-manual-and-autonomous-work/>).

Irregular loads within the rules

Irregular is fine; incompatible is not. Whatever the exception, loads must stay within the hard limits: 1,600 kg maximum payload, open-base carrier within 1,250 × 1,250 mm including overhang, load height up to 1,700 mm. Carriers outside the envelope are not a judgment call — see [Open Cages and Alternative Load 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/>).

Industries

Where the J1600 fits, industry by industry: manufacturing, warehousing, logistics, distribution, and the pallet flows inside each.



Manufacturing

How manufacturers use the J1600 self-driving pallet jack for production supply, buffer management, and work-cell transport without a full automation project.



Warehousing

Using the J1600 self-driving pallet jack in warehouses for zone-to-zone transport, temporary storage, and changing layouts without infrastructure changes.



Third-Party Logistics

Why the J1600 suits third-party logistics providers - fast reconfiguration for changing clients, SKU mixes, and layouts without an automation project per contract.



Grocery and FMCG

The J1600 in grocery and fast-moving consumer goods distribution - GMA and EPAL pallet support, steady material flow, and manual judgment for mixed loads.



E-Commerce and Fulfillment

How e-commerce and fulfillment operations use the J1600 to reclaim walk time and stabilize material flow in fast-changing facilities, deployed in hours.



Goods Receiving

Using the J1600 in goods receiving - manual truck unloading combined with autonomous delivery to inspection or storage, and why the dock stays human.



Internal Production Logistics

The J1600 in internal production logistics - line feeding, buffer and staging management, and local work-cell automation inside factories.



Shipping and Dispatch

The J1600 in shipping and dispatch - autonomous transport from storage and production to outbound staging, with truck loading kept under manual control.

Manufacturing

Manufacturing is a primary target environment for the [J1600](https://info.mobilerobot.com/products/j1600/overview/) self-driving pallet jack. Small and medium manufacturers — and larger plants with many small, local material flows — use it to automate the repetitive travel between storage, production lines, staging areas, and shipping, while operators keep control of pickup and every maneuver that needs judgment.

The manufacturing fit

Most factories move pallets with manual pallet jacks because their flows are too small, too variable, or too budget-constrained for a conventional automation project. Full automation typically needs expert configuration, [systems integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/), infrastructure, and stable processes. The J1600's [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) sits between the two: the operator picks up materials manually, then sends the vehicle on the repetitive drive autonomously.

Typical manufacturing flows it serves:

- **[Production supply](https://info.mobilerobot.com/applications/use-cases/production-supply/)**. An operator prepares or picks a pallet of materials or components; the J1600 delivers it to the production line on demand.
- **[Buffer and staging management](https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/)**. Transport between lines, staging areas, and storage zones.
- **[Line-to-line and work-cell transport](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.
- **[Receiving-to-storage-to-production-to-shipping](https://info.mobilerobot.com/applications/use-cases/production-to-shipping-transport/)**. Automate the long travel segments connecting standard zones.

Routes can be a few meters or more than 100 meters — the workflow is the same: [pick manually, select a saved destination, confirm autonomous mode, and step away](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/).

Why judgment stays with the operator

Production environments generate [exceptions](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/) (<https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/>), constantly: an urgent line-starvation reprioritization, an [unstable or sensitive load](https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/) (<https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/>), a congested aisle, a misplaced pallet. 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/>), the operator handles these directly and can take over at any moment by grabbing the tiller. The robot handles the predictable part — the travel.

Practical constraints

- Autonomous driving requires [indoor, level floors](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/) (<https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/>) (0% automatic gradeability); slopes and dock plates are manual tasks.
- Automatic pallet delivery is at floor level. [Manual mode](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>) handles picks and drops up to 1,600 mm.
- [Operating temperature](https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/) (<https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/>) is 5–40 °C, ingress protection IP21.
- Loads must be [open-base carriers](https://info.mobilerobot.com/applications/planning/pallet-and-load-suitability/) (<https://info.mobilerobot.com/applications/planning/pallet-and-load-suitability/>), within a 1,250 × 1,250 mm envelope and up to 1,600 kg.

See the [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>) for the full envelope.

Fitting an existing plant

The J1600 is designed for [brownfield sites](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>). It navigates 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 tracks, wires, reflectors, or building modifications — and operators [add or change destinations by driving to a point](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>) and tapping **Save location**. Preferred travel zones can be defined for safer routing through production areas. Basic use requires [no Wi-Fi](https://info.mobilerobot.com/documentation/installation/net-work-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/net-work-and-wi-fi-requirements/>), no warehouse-management-system connection, and no IT project; [VDA 5050](https://info.mobilerobot.com/products/software/vda-5050/) (<https://info.mobilerobot.com/products/software/vda-5050/>), a [REST API](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>), and fleet management are available when a plant later scales up.

[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/).

Related pages

- [Internal production logistics](https://info.mobilerobot.com/applications/industries/internal-production-logistics/) (https://info.mobilerobot.com/applications/industries/internal-production-logistics/) — the intra-plant flows in detail
- [Goods receiving](https://info.mobilerobot.com/applications/industries/goods-receiving/) (https://info.mobilerobot.com/applications/industries/goods-receiving/) and [Shipping and dispatch](https://info.mobilerobot.com/applications/industries/shipping-and-dispatch/) (https://info.mobilerobot.com/applications/industries/shipping-and-dispatch/) — the inbound and outbound ends of the flow
- [Productivity improvements](https://info.mobilerobot.com/applications/results/productivity-improvements/) (https://info.mobilerobot.com/applications/results/productivity-improvements/) and [ROI examples](https://info.mobilerobot.com/applications/results/roi-examples/) (https://info.mobilerobot.com/applications/results/roi-examples/) — what manufacturers gain

Warehousing

Warehouses are the J1600's home turf: horizontal, indoor, floor-to-floor pallet flows between receiving, storage, staging, and shipping. The [J1600](https://info.mobilerobot.com/products/j1600/overview/) automates the repetitive travel in these flows while operators keep manual control of pickup and [exceptions](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/) — the [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) split that distinguishes it from both manual pallet jacks and conventional [AGVs](https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/).

Who it targets

The [priority segment](https://info.mobilerobot.com/company/about/markets-we-serve/) is warehouse operators running roughly one to five pallet-jack operators on a single shift — sites that cannot justify a large automation project but lose hours every day to walking and travel time. Larger warehouses use it for [local work cells](https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/) and flows too small or changeable for a conventional fleet deployment.

Warehouse flows it serves

- **Zone-to-zone transport.** Automate the long travel segments connecting receiving, storage, production, and shipping.
- **Temporary storage** (<https://info.mobilerobot.com/applications/use-cases/temporary-storage/>). [Create short-lived storage points when demand changes](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) — drive to the spot once, tap **Save location**, and it is a destination.
- **Cross-docking** (<https://info.mobilerobot.com/applications/use-cases/cross-docking/>). Shuffle pallets across multiple origins and destinations without teaching every possible A-to-B combination; saved locations recombine freely.
- **Buffer and staging** (<https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/>). Move pallets between staging areas and storage zones as flow requires.

There is no software limit on the number of [saved locations](https://info.mobilerobot.com/documentation/user-guides/location-management/) (<https://info.mobilerobot.com/documentation/user-guides/location-management/>); practical limits come from available floor space.

No infrastructure changes

The J1600 maps the warehouse with [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>) while an operator drives it. It needs no tracks, wires, reflectors, or building modifications, and it continuously updates its map as the environment changes — racking moved, pallets staged in new places, people in the aisles. Basic use needs [no Wi-Fi](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>), and [no warehouse-management-system integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>). When a site later wants orchestration, [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>) adds [VDA 5050](https://info.mobilerobot.com/products/software/vda-5050/) (<https://info.mobilerobot.com/products/software/vda-5050/>), a [REST API](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>), and fleet management.

Operating envelope

- Payload up to 1,600 kg; manual picks and drops up to 1,600 mm; autonomous delivery at floor level.
- Top speed 5.4 km/h.
- [Indoor, level floors](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/) (<https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/>) for autonomous mode; 5–40 °C; 20–80% non-condensing humidity; floor flatness to TR34 FM3 (FF 25 / FL 20).
- [Open-base pallets and carriers](https://info.mobilerobot.com/applications/planning/pallet-and-load-suitability/) (<https://info.mobilerobot.com/applications/planning/pallet-and-load-suitability/>) within 1,250 × 1,250 mm, load height up to 1,700 mm — EPAL Euro Pallet, EPAL 3, EPAL 6, open-base GMA pallets, and other forkable open-base carriers.

Full details are in the [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Related pages

- [Goods receiving](https://info.mobilerobot.com/applications/industries/goods-receiving/) (https://info.mobilerobot.com/applications/industries/goods-receiving/) — the inbound end of the warehouse flow
- [Shipping and dispatch](https://info.mobilerobot.com/applications/industries/shipping-and-dispatch/) (https://info.mobilerobot.com/applications/industries/shipping-and-dispatch/) — the outbound end
- [Third-party logistics](https://info.mobilerobot.com/applications/industries/third-party-logistics/) (https://info.mobilerobot.com/applications/industries/third-party-logistics/) — warehousing on behalf of clients
- [Reduction in manual walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) (https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) and [Operational flexibility](https://info.mobilerobot.com/applications/results/operational-flexibility/) (https://info.mobilerobot.com/applications/results/operational-flexibility/) — the outcomes warehouses target

Third-Party Logistics

Third-party logistics (3PL) providers are a named [target segment](https://info.mobilerobot.com/company/about/markets-we-serve/) (<https://info.mobilerobot.com/company/about/markets-we-serve/>), for the [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>). Smaller 3PLs in particular face a structural problem with automation: their layouts, clients, and SKU mixes change too often for infrastructure-heavy systems, yet their margins are squeezed by exactly the repetitive pallet travel that automation removes.

The 3PL problem

A 3PL warehouse is rarely stable. Client contracts start and end, storage zones are reassigned, temporary buffers appear and disappear, and the SKU mix shifts with each client's season. Conventional automation assumes stable processes and pays back over years of unchanged operation — a poor match. Manual pallet jacks stay flexible but consume operator hours in [walking and travel](https://info.mobilerobot.com/application/s/results/reduction-in-manual-walking/) (<https://info.mobilerobot.com/application/s/results/reduction-in-manual-walking/>).

How the J1600 fits

The [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>) approach keeps the flexibility and removes the travel:

- **Reconfiguration by the operator, not an engineer.** When a client's zone moves, the operator drives to the new point, taps **Save location**, and the flow is updated — no automation specialist, no code, no map project.
- **[Multi-point cross-docking](https://info.mobilerobot.com/applications/use-cases/cross-docking/)** (<https://info.mobilerobot.com/applications/use-cases/cross-docking/>). Saved locations recombine freely, so pallets can move across many origin-destination pairs without teaching each one.
- **[Temporary storage on demand](https://info.mobilerobot.com/applications/use-cases/temporary-storage/)** (<https://info.mobilerobot.com/applications/use-cases/temporary-storage/>). Short-lived buffer points are [created in minutes and abandoned just as easily](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>).
- **Manual handling where it matters.** Truck unloading, mixed and unstable client loads, and congested docks stay under operator control with immediate takeover via the tiller.

Economics for smaller 3PLs

The J1600 targets single-shift operations with roughly one to five pallet-jack operators — the scale where a full automation project (which can reach approximately €1 million for a fully integrated system) is out of reach. The J1600 lists at €65,000, deploys in hours to one day, and requires about 30 minutes of [operator training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>). 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 lets a 3PL validate a specific client flow before committing. See [ROI examples](https://info.mobilerobot.com/applications/results/roi-examples/) (<https://info.mobilerobot.com/applications/results/roi-examples/>).

Scaling with the business

A 3PL can start with one robot on one flow, with [no Wi-Fi](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>) or [systems integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>) required. When volume grows, [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>) adds [VDA 5050](https://info.mobilerobot.com/products/software/vda-5050/) (<https://info.mobilerobot.com/products/software/vda-5050/>) interoperability, a [REST API](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>), and [Fleet Manager](https://info.mobilerobot.com/products/software/fleet-manager/) (<https://info.mobilerobot.com/products/software/fleet-manager/>), so the J1600 can join a multi-vendor fleet under a compatible fleet layer.

Load compatibility across clients

Client variety means carrier variety. The J1600 handles EPAL Euro Pallets, EPAL 3, EPAL 6, open-base GMA pallets, open cages, and other [forkable open-base carriers](https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/) (<https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/>) within a 1,250 × 1,250 mm envelope and 1,600 kg payload. Judgment about unusual or unstable client loads stays with the operator — see [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/>).

Related pages

- [Warehousing](https://info.mobilerobot.com/applications/industries/warehousing/) (<https://info.mobilerobot.com/applications/industries/warehousing/>) — the underlying warehouse flows
- [E-commerce and fulfillment](https://info.mobilerobot.com/applications/industries/e-commerce-and-fulfillment/) (<https://info.mobilerobot.com/applications/industries/e-commerce-and-fulfillment/>) — a common 3PL service line

- [Operational flexibility \(https://info.mobilerobot.com/applications/results/operational-flexibility/\)](https://info.mobilerobot.com/applications/results/operational-flexibility/) — the core 3PL benefit in detail

Grocery and FMCG

Grocery and fast-moving consumer goods (FMCG) distribution is a named [priority segment](https://info.mobilerobot.com/company/about/markets-we-serve/) for the [J1600](https://info.mobilerobot.com/products/j1600/overview/) self-driving pallet jack. These operations move high pallet volumes on tight schedules, and much of that movement is repetitive travel between receiving, storage, staging, and [dispatch](https://info.mobilerobot.com/applications/industries/shipping-and-dispatch/) — exactly the portion the J1600 automates.

Why grocery and FMCG distribution

High-frequency replenishment makes pallet travel a constant cost. Demand shifts, promotions, and seasonal peaks change floor layouts and buffer locations faster than conventional automation can be reconfigured. The J1600's [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) keeps operators in control of pickup and load judgment while [removing the walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/):

- **Dock-to-storage and storage-to-staging travel** runs autonomously after a manual pick.
- **Temporary buffers** [for promotions or peak periods are created by driving to a point](https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/) and tapping **Save location** — and removed just as quickly.
- **Cross-docking** [across multiple origins and destinations works by recombining saved locations, without a bespoke task for every pair.](https://info.mobilerobot.com/applications/use-cases/cross-docking/)
- **Steadier material flow** comes from consistent, repeatable autonomous delivery runs.

Pallet compatibility

Grocery and FMCG networks run on standard pallet formats, and the J1600 supports the common ones directly:

Carrier	Support
EPAL Euro Pallet, EPAL 3, EPAL 6	Supported
GMA pallets	All GMA pallets with an open base
Other carriers	Any forkable open-base carrier within the size limits

The [load envelope](https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/) (<https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/>) is 1,250 × 1,250 mm including overhang, load height up to 1,700 mm from the floor, and payload up to 1,600 kg. Carriers must have an open base with no bottom deck board so the forks can enter. Compatibility for an unusual carrier depends on base geometry, size, stability, and operator judgment.

Handling the messy reality

FMCG warehouses see damaged pallets, loose stretch-wrap tails, leaking or crushed cartons, and [top-heavy mixed-SKU loads](https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/) (<https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/>). These are the situations where [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/>) earns its place: the operator spots the problem at pickup, handles it manually, and hands only the predictable travel to the robot.

Environmental limits

The J1600 operates indoors at 5–40 °C with 20–80% non-condensing humidity and IP21 ingress protection. Ambient-temperature distribution areas are in range; chilled or frozen zones below 5 °C fall outside the specified [operating envelope](https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/) (<https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/>). Autonomous driving requires [level floors](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/) (<https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/>) — dock plates and ramps remain manual. Full details are in the [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Related pages

- [Warehousing](https://info.mobilerobot.com/applications/industries/warehousing/) (<https://info.mobilerobot.com/applications/industries/warehousing/>) — the general warehouse flows behind grocery distribution

- [Goods receiving](https://info.mobilerobot.com/applications/industries/goods-receiving/) (https://info.mobilerobot.com/applications/industries/goods-receiving/) — the inbound dock processes
- [Productivity improvements](https://info.mobilerobot.com/applications/results/productivity-improvements/) (https://info.mobilerobot.com/applications/results/productivity-improvements/) — throughput and flow outcomes

E-Commerce and Fulfillment

E-commerce and fulfillment operations are a [target segment](https://info.mobilerobot.com/company/about/markets-we-serve/) for the [J1600](https://info.mobilerobot.com/products/j1600/overview/) self-driving pallet jack. Fulfillment sites live on throughput and change constantly — two conditions that favor automation which deploys in hours and reconfigures in minutes rather than requiring an infrastructure project.

What fulfillment sites gain

The J1600 gives [factories](https://info.mobilerobot.com/applications/industries/manufacturing/), third-party-logistics warehouses, and e-commerce fulfillment centers four outcomes:

- **Reclaimed walk time** (<https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/>). Operators stop escorting pallets across the building; travel runs autonomously after a manual pick.
- **Stabilized material flow.** Repeatable autonomous delivery runs smooth out the peaks and gaps of manual transport.
- **Higher throughput without infrastructure overhaul.** No tracks, wires, reflectors, or building modifications — the robot maps the site with [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) while an operator drives it.
- **Deployment in hours rather than months.** Typical setup takes hours to one day, and [operator training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) takes about 30 minutes.

Built for facilities that change

Even the most automated fulfillment operations stay in motion. [Observations from a visit to a major e-commerce cross-docking facility](https://info.mobilerobot.com/newsroom/stories/behind-the-scenes/) shaped the J1600's flexibility-first design: layout, flow, buffer, and SKU-mix changes occurred several times per week; not every process was automated despite heavy robotics investment; and minor mechanical downtime happened several times a day. The conclusion — flexibility and robustness are business necessities even in highly automated facilities — is why the J1600 pairs

autonomy with immediate manual takeover instead of pursuing full automation. See [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>).

In practice this means:

- **Peak-season buffers** (<https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/>) are [saved as new locations in minutes](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>) and retired after the peak.
- **Cross-docking flows** (<https://info.mobilerobot.com/applications/use-cases/cross-docking/>) recombine saved origins and destinations without teaching every pair.
- **Exceptions** (<https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/>) **stay human**. Congested aisles, urgent reprioritizations, and awkward loads are handled manually, with takeover available at any moment via the tiller.

Scale path

A fulfillment site can start with a single robot, [no Wi-Fi](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>), and [no warehouse-management-system integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>). When orchestration becomes worthwhile, the [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>) adds [VDA 5050](https://info.mobilerobot.com/products/software/vda-5050/) (<https://info.mobilerobot.com/products/software/vda-5050/>) interoperability, a [REST API](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>), and [Fleet Manager](https://info.mobilerobot.com/products/software/fleet-manager/) (<https://info.mobilerobot.com/products/software/fleet-manager/>), letting the J1600 work alongside robots from other vendors under a compatible fleet layer.

Operating envelope

Payload up to 1,600 kg; autonomous delivery at floor level; [indoor, level floors](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/) (<https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/>); 5–40 °C; [open-base carriers](https://info.mobilerobot.com/applications/planning/pallet-and-load-suitability/) (<https://info.mobilerobot.com/applications/planning/pallet-and-load-suitability/>) within 1,250 × 1,250 mm. See the [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Related pages

- [Third-party logistics](https://info.mobilerobot.com/applications/industries/third-party-logistics/) (https://info.mobilerobot.com/applications/industries/third-party-logistics/) — fulfillment run as a service
- [Warehousing](https://info.mobilerobot.com/applications/industries/warehousing/) (https://info.mobilerobot.com/applications/industries/warehousing/) — the underlying zone-to-zone flows
- [Faster deployment](https://info.mobilerobot.com/applications/results/faster-deployment/) (https://info.mobilerobot.com/applications/results/faster-deployment/) and [Operational flexibility](https://info.mobilerobot.com/applications/results/operational-flexibility/) (https://info.mobilerobot.com/applications/results/operational-flexibility/) — the outcomes fulfillment sites value most

Goods Receiving

Goods receiving is one of the J1600's core applications and a clear illustration of its [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>), [division of work](https://info.mobilerobot.com/applications/scenarios/mixed-manual-and-autonomous-work/) (<https://info.mobilerobot.com/applications/scenarios/mixed-manual-and-autonomous-work/>): the dock is human territory, the travel afterward is not. An operator [unloads the truck manually, then sends each pallet autonomously](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>) to inbound inspection or storage.

The receiving workflow

1. The operator unloads a pallet from the truck in [manual mode](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>), — the J1600 handles like a conventional walk-behind electric pallet jack.
2. On the touchscreen, the operator selects the saved destination (inspection area, storage zone, or staging point) and a post-delivery behavior.
3. The operator [confirms autonomous mode](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>), with the physical start button and steps away.
4. The J1600 drives to the destination, avoids obstacles on the way, drops the pallet at floor level, and — in the common "[boomerang](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/)" [pattern](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>), — returns to the dock for the next pallet.

While the robot travels, the operator keeps unloading. The repetitive walk between dock and storage disappears from the operator's day.

Why the dock stays manual

Receiving concentrates the situations where human judgment beats automation:

- **Dock plates and trailer interiors.** Autonomous mode has 0% gradeability and requires [level floors](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/) (<https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/>); bumps, slopes, and misaligned dock plates are handled manually (manual gradeability is 5% unloaded, 3% at full load, with a maximum traversable bump of 25 mm and gap of 20 mm).
- **Damaged pallets and goods.** A broken bottom board, protruding nail, leak, or crushed corner is spotted by the operator before it becomes a jam or a customer

problem.

- **Unstable and wrapped loads.** [Top-heavy stacks](https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/) (<https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/>) and loose stretch-wrap tails get judged and fixed at pickup.
- **Crowded receiving floors** (<https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/>). The operator improvises a safe route through congestion that would stall a fully automated vehicle.

This split is the practical case for [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/>).

Setting up a receiving flow

[Destinations are created by driving to the point once](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>) and tapping **Save location** — inspection lanes, storage aisles, and [temporary overflow areas](https://info.mobilerobot.com/applications/use-cases/temporary-storage/) (<https://info.mobilerobot.com/applications/use-cases/temporary-storage/>) can each be a named location, with no software limit on how many. Locations recombine freely, so receiving can feed multiple zones without teaching each dock-to-zone pair separately.

Load compatibility at the dock

Inbound freight arrives on varied carriers. The J1600 accepts EPAL Euro Pallets, EPAL 3, EPAL 6, open-base GMA pallets, and any [forkable open-base carrier](https://info.mobilerobot.com/applications/planning/pallet-and-load-suitability/) (<https://info.mobilerobot.com/applications/planning/pallet-and-load-suitability/>) within 1,250 × 1,250 mm and 1,600 kg. Carriers need an open base with no bottom deck board. Details in [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Related pages

- [Warehousing](https://info.mobilerobot.com/applications/industries/warehousing/) (<https://info.mobilerobot.com/applications/industries/warehousing/>) — where the pallets go next
- [Shipping and dispatch](https://info.mobilerobot.com/applications/industries/shipping-and-dispatch/) (<https://info.mobilerobot.com/applications/industries/shipping-and-dispatch/>) — the mirror-image outbound process
- [Reduction in manual walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) (<https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/>) — the main receiving-area gain

Internal Production Logistics

Internal production logistics — the pallet flows that feed, connect, and clear production lines — is a named application sector for the **J1600** (<https://info.mobilerobot.com/products/j1600/overview/>). It covers the transport work between storage, staging, lines, and buffers that keeps a factory running but adds no value of its own.

Flows the J1600 automates

- **Line feeding on demand** (<https://info.mobilerobot.com/applications/use-cases/production-supply/>). An operator picks or prepares a pallet of materials or components; the J1600 delivers it to the production line autonomously.
- **Buffer and staging management** (<https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/>). Move pallets between lines, staging areas, and storage zones as production consumes them.
- **Line clearance**. Send finished or intermediate goods from the line to storage or the next process step.
- **Local work cells** (<https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/>). Serve a stand-alone flow inside a larger facility — a single cell, a single line pair — where a full fleet project would be excessive.

The common pattern is **manual pick, autonomous delivery** (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>), floor-level drop, and a configured follow-up: **return to the operator ("boomerang")** (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>), continue to another point, park, or **stop and wait** (<https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/>). With Advanced software, **come-to-me** (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>) lets a line worker call the robot to their position from a mobile or web interface.

Production-floor behavior

Production areas mix people, forklifts, and changing obstacles. The J1600 navigates by **3D LiDAR SLAM** (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>), continuously updating its map, and avoids obstacles along the route. Preferred travel zones can be defined so autonomous traffic keeps to safer corridors through production areas. A 360-degree, speed-dependent safety field with certified

components protects the people around it — see [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/>).

[Urgency stays human](https://info.mobilerobot.com/safety-compliance/safety-overview/human-responsibilities/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/human-responsibilities/>): when a line is starving, the operator reprioritizes immediately instead of waiting on a system queue, and can take over any vehicle by grabbing the tiller.

Changing the flow without a project

Production layouts change with every new product and line rebalance. [Adding or moving a delivery point takes minutes](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>): drive there, tap **Save location**, name it. There is no software limit on saved locations, and no automation engineer is needed — the [design principle](https://info.mobilerobot.com/company/about/our-approach-to-automation/) (<https://info.mobilerobot.com/company/about/our-approach-to-automation/>) is that operators, not experts, reconfigure the flow. Basic use requires [no Wi-Fi](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>) and no connection to manufacturing IT systems; [VDA 5050](https://info.mobilerobot.com/products/software/vda-5050/) (<https://info.mobilerobot.com/products/software/vda-5050/>), a [REST API](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>), and [Fleet Manager](https://info.mobilerobot.com/products/software/fleet-manager/) (<https://info.mobilerobot.com/products/software/fleet-manager/>) are available under [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>) when integration becomes worthwhile.

Constraints on the factory floor

Autonomous mode needs [indoor, level floors](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/) (<https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/>) (0% gradeability) with flatness to TR34 FM3; ramps between halls are manual segments. Automatic delivery is at floor level; placing loads at height (up to 1,600 mm) is a [manual operation](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>). Operating range is 5–40 °C. See [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Related pages

- [Manufacturing](https://info.mobilerobot.com/applications/industries/manufacturing/) (<https://info.mobilerobot.com/applications/industries/manufacturing/>) — the broader manufacturing context
- [Warehousing](https://info.mobilerobot.com/applications/industries/warehousing/) (<https://info.mobilerobot.com/applications/industries/warehousing/>) — the storage side of the flow

- [Labor reallocation](https://info.mobilerobot.com/applications/results/labor-reallocation/) (https://info.mobilerobot.com/applications/results/labor-reallocation/) — what production teams do with the recovered time

Shipping and Dispatch

Shipping is a named target environment for the [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>): the outbound end of the warehouse or factory, where pallets travel from storage, [production](https://info.mobilerobot.com/applications/use-cases/production-to-shipping-transport/) (<https://info.mobilerobot.com/applications/use-cases/production-to-shipping-transport/>), or staging toward the dock. As in [goods receiving](https://info.mobilerobot.com/applications/industries/goods-receiving/) (<https://info.mobilerobot.com/applications/industries/goods-receiving/>), the J1600 automates the long travel segments and leaves the dock work to the operator.

The outbound workflow

1. An operator [picks the outbound pallet manually](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>) — from storage, a production line, or a staging lane.
2. On the touchscreen, the operator selects the saved destination in the shipping area and what the robot should do afterward.
3. After confirmation with the physical start button, the J1600 drives autonomously, avoids obstacles, and drops the pallet at floor level in the outbound zone.
4. The final movement into the truck or trailer is manual: dock plates and slopes are outside autonomous mode's 0% gradeability, and [loading judgment stays with the operator](https://info.mobilerobot.com/safety-compliance/safe-deployment/operator-responsibilities/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/operator-responsibilities/>).

Useful [post-delivery behaviors](https://info.mobilerobot.com/documentation/user-guides/task-management/) (<https://info.mobilerobot.com/documentation/user-guides/task-management/>) for dispatch flows:

- **[Drop and wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/)** (<https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/>) — deliver to the staging lane and remain there until the operator arrives.
- **[Deliver and park](https://info.mobilerobot.com/applications/scenarios/deliver-and-park/)** (<https://info.mobilerobot.com/applications/scenarios/deliver-and-park/>) — complete the drop and proceed to a defined parking location out of the way of dock traffic.
- **[Boomerang](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/)** (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>) — return to the origin or operator for the next pallet.
- **[Simple ABC](https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/)** (<https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/>) — deliver from A to B, then continue to C, chaining staging moves.

Staging that follows the schedule

[Outbound staging](https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/) (<https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/>) is temporary by nature: lanes fill and empty with each departure, and peak days need extra buffer space. [New staging points are saved by driving to them once](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>) and tapping **Save location**, with no software limit on the number of locations. [Multi-point-to-multi-point combinations](https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/) (<https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/>) support [cross-docking-style flows](https://info.mobilerobot.com/applications/use-cases/cross-docking/) (<https://info.mobilerobot.com/applications/use-cases/cross-docking/>), where inbound pallets move directly toward outbound lanes.

Keeping the dock moving

While the J1600 shuttles pallets to the staging area, the operator stays at the dock loading, checking, and sequencing. Congested dock floors, last-minute order changes, and urgent reprioritization remain human decisions with immediate manual takeover via the tiller — the [human-in-the-loop](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/) (<https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/>), split applied to outbound flow. Routes of a few meters or well over 100 meters follow the same workflow.

Practical limits

Autonomous operation is [indoor and level-floor](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/) (<https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/>); automatic delivery is at floor level; payload is up to 1,600 kg on [open-base carriers](https://info.mobilerobot.com/applications/planning/pallet-and-load-suitability/) (<https://info.mobilerobot.com/applications/planning/pallet-and-load-suitability/>) within a 1,250 × 1,250 mm envelope. Full data in the [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Related pages

- [Warehousing](https://info.mobilerobot.com/applications/industries/warehousing/) (<https://info.mobilerobot.com/applications/industries/warehousing/>) — the zone-to-zone flows feeding dispatch
- [Goods receiving](https://info.mobilerobot.com/applications/industries/goods-receiving/) (<https://info.mobilerobot.com/applications/industries/goods-receiving/>) — the inbound mirror image
- [Productivity improvements](https://info.mobilerobot.com/applications/results/productivity-improvements/) (<https://info.mobilerobot.com/applications/results/productivity-improvements/>) — the throughput case for automating outbound travel



Customer Stories

How organizations experience the J1600 in practice — from first hands-on demonstrations to partner-supported projects and public video stories.



Partner-Led Customer Projects

How partners of The Mobile Robot Company run local J1600 demonstrations, trials, and customer projects, including the ALCA Technologies collaboration and the United Symbol Ope...



Video Case Stories

Public videos showing the J1600 in real use, including a first-time user automating a pallet move at TEST CAMP INTRALOGISTICS 2026, live demonstrations, load-handling examples, an...

Partner-Led Customer Projects

The Mobile Robot Company sells the J1600 through an international network of [distributors, integrators, and service partners](https://info.mobilerobot.com/partners/program/partner-types/) (<https://info.mobilerobot.com/partners/program/partner-types/>). Partners run the local, hands-on part of every customer project: demonstrations, trials, deployment, service, and the ongoing customer relationship. This page describes how partner-led projects work and covers the partner activity in Italy with [ALCA Technologies](https://info.mobilerobot.com/company/collaborations/technology-collaborations/) (<https://info.mobilerobot.com/company/collaborations/technology-collaborations/>).

How a partner-led project runs

The [customer journey](https://info.mobilerobot.com/company/about/business-model/) (<https://info.mobilerobot.com/company/about/business-model/>) has four steps:

1. **Demonstration.** A 30–60 minute hands-on session at a partner experience center or at the customer site. A first-time visitor can typically create and launch an autonomous task within about 15 minutes.
2. **Trial.** A two-week paid trial at the customer's own facility, with free return at any time, no questions asked. See [Trial planning](https://info.mobilerobot.com/applications/planning/trial-planning/) (<https://info.mobilerobot.com/applications/planning/trial-planning/>).
3. **Purchase.** Full purchase of the robot and selected options.
4. **After-sales service.** An optional ongoing service and maintenance agreement, delivered locally by the partner.

Repeat customers can skip the demonstration and trial steps. Throughout the project, the partner provides local presence and responsive support while The Mobile Robot Company supplies robots, parts, software, technical support, and training.

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/>), with the network expanding. The EMEA distributor and integrator network runs plant trials and proofs of concept at customer sites; see [Proof-of-concept planning](https://info.mobilerobot.com/applications/planning/proof-of-concept-planning/) (<https://info.mobilerobot.com/applications/planning/proof-of-concept-planning/>).

ALCA Technologies collaboration

ALCA Technologies S.r.l. is a collaboration partner of The Mobile Robot Company in Italy. The collaboration, [highlighted in July 2026](https://info.mobilerobot.com/newsroom/press-releases/partner-announcements/) (<https://info.mobilerobot.com/newsroom/press-releases/partner-announcements/>), centers on the warehouse conditions that can disrupt rigid automation:

- broken pallets;
- loose strapping;
- hanging stretch wrap;
- dust and other imperfect or changing handling conditions.

The J1600 addresses these situations through [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>): the operator applies experience and situational awareness during pallet pickup, and the vehicle performs the repetitive autonomous transport. The outcomes presented from the collaboration are less [non-value-added walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) (<https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/>), safer pallet handling, smoother material flow, higher productivity, and better adaptability in dynamic warehouse environments.

United Symbol Open House 2026

The J1600 was demonstrated live at the [United Symbol Open House](https://info.mobilerobot.com/newsroom/events/past-events/) (<https://info.mobilerobot.com/newsroom/events/past-events/>) in Sassuolo, Modena, Italy, over three days ending 29 June 2026. United Symbol hosted the event, and ALCA Technologies provided local support. Visitors — industry leaders and end customers from multiple industries — saw manual and autonomous operation and discussed warehouse efficiency, reduced manual handling, scalable automation, and everyday intralogistics problems with the team.

Starting a project with a partner

Customer inquiries placed through [mobilerobot.com](https://www.mobilerobot.com) (<https://www.mobilerobot.com>) are routed to [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/>). To prepare for a first conversation, work through the [application qualification checklist](https://info.mobilerobot.com/applications/planning/application-qualification-checklist/) (<https://info.mobilerobot.com/applications/planning/application-qualification-checklist/>), and read [Is the J1600 right for my application?](https://info.mobilerobot.com/) (<https://info.mobilerobot.com/>)

[applications/planning/is-the-j1600-right-for-my-application/](#)) For the partner program itself, see [Partners](#) (<https://info.mobilerobot.com/category/partners/>).

Video Case Stories

The Mobile Robot Company publishes [videos](https://info.mobilerobot.com/newsroom/videos/full-video-library/) that show the J1600 operating in real settings — [live demonstrations](https://info.mobilerobot.com/newsroom/videos/product-demonstrations/) at [public events](https://info.mobilerobot.com/newsroom/events/trade-shows/), a first-time user creating an autonomous task, load-handling examples, and validation at the company's [Copenhagen test facility](https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/). This page collects the stories those videos tell and links to each one.

A first-time user automates a pallet move

At [TEST CAMP INTRALOGISTICS 2026](https://info.mobilerobot.com/newsroom/events/test-camp/) in Dortmund, a visiting logistics professional who had used electric pallet jacks — but never the J1600 — tried the vehicle for the first time:

1. She drove the J1600 manually with the tiller, which handles like a conventional electric pallet jack. White lights indicate manual mode.
2. She drove to a drop point, tapped **Save location**, and named the location after her organization.
3. She created a task, chose "drop pallet at location," and selected return to origin as the post-delivery behavior.
4. She confirmed automatic mode and stepped away.
5. The J1600 traveled autonomously, [routed around people](https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/) using its 3D environment map, dropped the pallet at floor level, and returned.

There is no software limit to the number of saved locations. Watch: [Can Anyone Automate a Pallet Move in Minutes?](https://www.youtube.com/watch?v=PHBLT4XyvyI)

Live demonstration at TEST CAMP INTRALOGISTICS 2026

In an interview with a trade journalist, CEO Emil Hauch Jensen demonstrates the full working cycle live: manual pallet pickup, location saving, autonomous delivery with

drop-and-return, and the 360-degree safety field. He describes the three barriers that keep companies from full automation — price, flexibility, and complexity — and the J1600's proposition of automating [roughly 80% of the repetitive transport work](https://info.mobilerobot.com/applications/results/productivity-improvements/) rather than 100%, at a fraction of the cost of a full automation project. Start-up takes about one hour. Watch: [J1600 Live Demo at TEST CAMP 2026](https://www.youtube.com/watch?v=Ovffa1uGTQE).

Handling open cages, barrels, and sensitive loads

Two videos show the [flexibility](https://info.mobilerobot.com/applications/results/operational-flexibility/) of manual judgment combined with autonomous travel:

- The J1600 handles [open cages](https://info.mobilerobot.com/applications/use-cases/open-cages-and-alternative-load-carriers/), EPAL Euro pallets, and other open-base carriers within its size limits. Watch: [Dual Mode J1600 AMR: Flexible Handling of Open Cages and Euro Pallets](https://www.youtube.com/watch?v=ovlpXTxkn8Y)
- For [sensitive or unstable loads](https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/), such as barrels, the operator uses manual control for pickup and confined maneuvering, then hands the long transport leg to autonomous mode. Watch: [What extra capabilities does the Dual Mode Pallet Jack J1600 offer?](https://www.youtube.com/watch?v=HKGv7uzNxlw)

For the load envelope, see [Pallet and load suitability](https://info.mobilerobot.com/applications/planning/pallet-and-load-suitability/).

Lifting and carrying at capacity

CTO Odin Kudahl Skovsted shows the J1600 picking from a height of 1.6 m in manual mode and carrying 1,600 kg. Watch: [How Our Mobile Robots Handle 1,600 kg Loads at 1.6 Meters](https://www.youtube.com/watch?v=7QXbmem2i2w).

Validation at the Copenhagen test facility

The company's Copenhagen demo and test area is built for intentionally real-world conditions: deliberately uneven flooring, water-filled test loads, and multiple simultaneous test setups. Customers can visit for demos and trials. Watch: [Inside Our Copenhagen Test Facility](https://www.youtube.com/watch?v=vrrAAjAMF-8)

For on-site evaluation options, see [Proof-of-concept planning](https://info.mobilerobot.com/applications/planning/proof-of-concept-planning/) (<https://info.mobilerobot.com/applications/planning/proof-of-concept-planning/>).

Short tutorials and answers

Topic	Video
Saving a drop location and creating a task	How to Add a Drop Location & Create Tasks on the J1600 (https://www.youtube.com/watch?v=OGiOVtdKbk8)
Manual and automatic charging	How to Charge Your Robot (https://www.youtube.com/watch?v=I6GJ07Kbi4Y)
The most common task pattern	What's the most common task our robot performs? (https://www.youtube.com/watch?v=b0aOQWWNlws)
What dual mode is	What is Dual Mode (https://www.youtube.com/watch?v=MgmWCbdoge8)
Brownfield sites	Does the J1600 work on brownfield sites? (https://www.youtube.com/watch?v=Qe5kres-lgY)

The most commonly demonstrated 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](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>). The route can be a few meters or more than 100 meters — the concept is the same. More product questions are answered in the [product and capabilities FAQ](https://info.mobilerobot.com/support/faq/product-and-capabilities/) (<https://info.mobilerobot.com/support/faq/product-and-capabilities/>).

Results and Business Impact

The outcomes a J1600 deployment targets: productivity gains, less walking, safer handling, faster deployment, and measurable return on investment.



Productivity Improvements

What productivity gain the J1600 targets - up to 80% less operator time on repetitive pallet transport, steadier material flow, and higher throughput.



Reduction in Manual Walking

How the J1600 removes repetitive operator walking from pallet transport - the design principle, the scale of the problem, and the effect on employees.



Labor Reallocation

How the J1600 shifts operator time from repetitive transport to judgment work, and how it helps sites cope with labor shortages.



Safety Improvements

The safety case for the J1600 - certified safety functions, a 360-degree protective field, and predictable autonomous behavior compared with manual pallet handling.



Faster Deployment

How fast a J1600 goes live - setup in hours to one day, about 30 minutes of operator training, and a first autonomous task within roughly 15 minutes.



Lower Integration Complexity

Why the J1600 needs no systems integration for basic use - optional Wi-Fi, no WMS dependency, no infrastructure - and how VDA 5050 and APIs add integration later.



Operational Flexibility

How the J1600 keeps operations flexible - immediate manual takeover, reconfiguration in minutes, brownfield navigation, and resilience to constant layout change.



ROI Examples

J1600 investment and return in numbers - list prices from EUR 65,000, typical configurations around EUR 80,000, the contrast with EUR 1 million full-automation projects, and the returns...

Productivity Improvements

The J1600's central productivity claim is precise: up to 80% reduction in manual work and operator time on repetitive pallet transport. It is a claim about the transport task the robot takes over — not an 80% improvement to every warehouse process.

Where the gain comes from

In a manual flow, the operator travels with every pallet: pick, walk the route, drop, walk back. With the [J1600](https://info.mobilerobot.com/products/j1600/overview/), the operator [picks manually, sends the robot](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/), and immediately starts the next value-adding task while the vehicle drives, drops at floor level, and follows its configured post-delivery behavior. The travel — a few meters or more than 100 meters — no longer consumes operator time.

The intended balance is roughly 80% automation rather than 100%. The last portion of pallet work (judging loads, placing forks, [handling exceptions](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/)) is disproportionately expensive to automate; leaving it with the operator keeps the system simple while capturing most of the labor benefit. 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/).

The three-model comparison

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

Full automation can beat the J1600 on paper for a perfectly stable task — but it typically requires [warehouse-management-system and fleet integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>), infrastructure, and expert configuration, with investments that can reach approximately €1 million. The J1600 targets most of the benefit at a fraction of that cost and complexity.

Throughput and flow effects

Beyond recovered operator hours, consistent autonomous delivery runs produce steadier material flow and throughput: deliveries happen at a repeatable pace instead of depending on who is free to walk a pallet. Sustained operation is supported by a [24 V, 200 Ah LiFePO4 battery](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/>) with runtime exceeding eight hours in a typical duty cycle, [opportunity charging](https://info.mobilerobot.com/applications/scenarios/automatic-charging/) (<https://info.mobilerobot.com/applications/scenarios/automatic-charging/>), (about 47 percentage points per hour), and a 5.4 km/h top speed.

Who captures the gain fastest

The economics are designed for single-shift operations running eight hours per day, five days per week, with roughly one to five pallet-jack operators — sites where recovered operator time converts directly into more picks, faster receiving, or a leaner shift. Larger facilities capture the same gain in [local work cells](https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/) (<https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/>), too small for a fleet project.

Related pages

- [Reduction in manual walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) (<https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/>) — the human side of the same gain
- [Labor reallocation](https://info.mobilerobot.com/applications/results/labor-reallocation/) (<https://info.mobilerobot.com/applications/results/labor-reallocation/>) — what teams do with the recovered time
- [ROI examples](https://info.mobilerobot.com/applications/results/roi-examples/) (<https://info.mobilerobot.com/applications/results/roi-examples/>) — converting the gain into payback
- [Manufacturing](https://info.mobilerobot.com/applications/industries/manufacturing/) (<https://info.mobilerobot.com/applications/industries/manufacturing/>) and [Warehousing](https://info.mobilerobot.com/applications/industries/warehousing/) (<https://info.mobilerobot.com/applications/industries/warehousing/>) — where the gain lands

Reduction in Manual Walking

"Automate the walking" is a core J1600 [design principle](https://info.mobilerobot.com/company/about/our-approach-to-automation/) (<https://info.mobilerobot.com/company/about/our-approach-to-automation/>). The product does not try to automate every nuance of pallet handling — it removes the repetitive travel that fills an operator's day without adding value.

The scale of the walking problem

Pallet transport is [a large, lightly automated activity](https://info.mobilerobot.com/documentation/concepts/pallet-automation-fundamentals/) (<https://info.mobilerobot.com/documentation/concepts/pallet-automation-fundamentals/>): more than one million pallet jacks are sold worldwide each year, more than 300,000 in Europe alone, and more than six million people use pallet jacks in their daily work. Only about 1% of pallet handling is automated. For most of those six million people, every pallet moved means walking the route with it — both ways.

What changes with the J1600

With the [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>), the walk disappears from the repetitive part of the task:

1. The operator [picks up the pallet manually](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>) — the judgment-heavy part.
2. The operator selects a saved destination on the touchscreen, confirms autonomous mode, and steps away.
3. The robot walks the route instead: it drives autonomously, avoids obstacles, drops at floor level, and returns, parks, waits, or continues as configured.

Whether the route is a few meters or more than 100 meters, the operator's share of it is now zero. In the common ["boomerang" pattern](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>), the robot returns to the operator for the next pallet while the operator keeps working at the pickup point — unloading a truck, picking the next load, or doing something else entirely.

The employee effect

Removing repetitive walking is an employee-satisfaction benefit, not only a cost line: less tiring, repetitive movement, and more time on work that uses judgment and skill. The company's position is that robots should assist rather than displace operators — the person keeps task authority, pickup, and [exception handling](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/) (<https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/>), while the tedious transport is delegated. See [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/>).

Walking that should remain

Not all movement belongs to the robot. Dock plates and slopes (autonomous gradeability is 0%), congested floors, misplaced pallets, and urgent reprioritizations are situations where a person walking over and taking the tiller is the fastest, safest answer. The J1600 supports immediate manual takeover precisely so this remaining walking stays rare and purposeful.

Related pages

- [Productivity improvements](https://info.mobilerobot.com/applications/results/productivity-improvements/) (<https://info.mobilerobot.com/applications/results/productivity-improvements/>) — the same effect measured in operator time
- [Safety improvements](https://info.mobilerobot.com/applications/results/safety-improvements/) (<https://info.mobilerobot.com/applications/results/safety-improvements/>) — fatigue and handling risk
- [Goods receiving](https://info.mobilerobot.com/applications/industries/goods-receiving/) (<https://info.mobilerobot.com/applications/industries/goods-receiving/>) — a flow where the dock-to-storage walk dominates

Labor Reallocation

The J1600 is built on the thesis that robots should assist rather than displace operators. Its business effect is reallocation: operator hours move from repetitive transport to the decisions and [exceptions](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/) that require human context.

The division of work

[Dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) draws a clear line between what people do and what the robot does:

Human operator	J1600
Judge load stability, pallet condition, congestion, urgency, and exceptions	Build and update a 3D map and navigate to saved points
Pick pallets and perform difficult or at-height handling (up to 1,600 mm)	Carry up to 1,600 kg along repetitive routes
Select the destination and what happens after delivery	Avoid obstacles and apply speed-dependent safety fields
Confirm entry into autonomous mode	Drop at floor level, then return, park, continue, or wait
Override or resume manual control at any time	Repeat stored tasks consistently

Where the recovered hours go

Time freed from walking pallets is redirected to work the robot cannot do: inspecting inbound goods, spotting damaged pallets and unstable loads before they become incidents, resolving congestion, reprioritizing when a production line is starving, and [handling sensitive or unusual loads](https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/). These are exactly the situations where human context outperforms automation — the reasoning behind [human-in-the-loop automation](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/).

The result is more productive use of skilled labor: pallet-jack operators become flow managers of their area rather than couriers within it.

Responding to labor shortages

Labor shortage and high labor dependency are among the customer problems the J1600 targets. When hiring is hard, automating the transport portion lets an existing team cover more flow: one operator can keep loading or picking while the robot runs deliveries in parallel. Because [training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) takes about 30 minutes for an existing electric-pallet-jack operator and no automation specialist is needed for reconfiguration, the reallocation does not create a new dependency on scarce technical staff.

Not a people-free process

The desired outcome is explicitly not a warehouse without people. [Task initiation, pickup, and mode confirmation always sit with a person](https://info.mobilerobot.com/documentation/user-guides/operator-manual/), and manual takeover is immediate via the tiller. Sites that need full task-labor elimination are the domain of fully automated systems — with the integration, infrastructure, and cost that entails. See [productivity improvements](https://info.mobilerobot.com/applications/results/productivity-improvements/) for the comparison.

Related pages

- [Reduction in manual walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) — the mechanics of the freed-up time
- [Safety improvements](https://info.mobilerobot.com/applications/results/safety-improvements/) — the risk side of moving people out of repetitive transport
- [Internal production logistics](https://info.mobilerobot.com/applications/industries/internal-production-logistics/) — reallocation on the factory floor

Safety Improvements

Manual pallet handling is tiring, repetitive work performed among people, racking, and vehicle traffic. The J1600 addresses this on two fronts: it removes operators from repetitive transport, and it performs that transport with a [layered, certified safety architecture](https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/safety-architecture/>).

Fewer exposure hours

Every hour an operator does not spend walking pallets through mixed traffic is an hour of removed exposure to collisions, strains, and fatigue-related mistakes. Reduced workplace accidents, injuries, and product damage are among the [non-labor benefits](https://info.mobilerobot.com/products/j1600/features-and-benefits/) (<https://info.mobilerobot.com/products/j1600/features-and-benefits/>) of a J1600 deployment, alongside less tiring work for employees. See [reduction in manual walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) (<https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/>).

Predictable machine behavior

An autonomous J1600 behaves consistently: it follows planned routes, respects its protective field, and repeats stored tasks the same way every time. Key elements of the safety system include:

- a 360-degree protective field covering forward and reverse autonomous travel;
- two 2D safety LiDAR scanners (front and rear) feeding an independent safety controller;
- [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/>) that expand as travel speed increases;
- [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/>) and a belly button for stop-and-reverse;
- blue floor-light strips showing the currently protected area around the vehicle;
- safety-certified encoders and motor controllers;
- [tiller-position switches](https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/tiller-detection/>), for emergency stop and immediate manual takeover.

Safety functions carry defined [Performance Levels](https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/performance-levels/>) under [EN ISO 13849-1](https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/) (<https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/>), — for example PL d for [braking](https://info.mobilerobot.com/safety-compliance/safety-functions/braking/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/braking/>), emergency stop, [person detection](https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/person-detection/>), and safety-field size adjustment. The full architecture is described 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/>).

The human contribution

Human control complements the certified systems rather than replacing them. The operator must confirm entry into autonomous mode, the robot instructs the person to step clear before starting, and grabbing the tiller returns the vehicle to manual control immediately. At pickup, [the operator catches hazards no sensor is asked to judge](https://info.mobilerobot.com/safety-compliance/safety-overview/human-responsibilities/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/human-responsibilities/>): broken bottom boards, protruding nails, unstable stacks, loose stretch wrap. See [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/>).

Compliance foundation

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/>), with a [compliance list](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/) (<https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/>) that includes [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/>) and [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/>) — the key European and US standards for driverless industrial trucks — among other directives and standards.

USE CURRENT DOCUMENTATION FOR DEPLOYMENT DECISIONS

Accident-rate test data, stopping-distance curves, and validation reports are not available. Base [site-specific risk assessments](https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/>) and deployment decisions on the current product documentation.

Related pages

- [Labor reallocation](https://info.mobilerobot.com/applications/results/labor-reallocation/) (https://info.mobilerobot.com/applications/results/labor-reallocation/) — moving people from transport to judgment work
- [Goods receiving](https://info.mobilerobot.com/applications/industries/goods-receiving/) (https://info.mobilerobot.com/applications/industries/goods-receiving/) — a high-exposure area where the split applies
- [Safety overview](https://info.mobilerobot.com/category/safety-compliance/) (https://info.mobilerobot.com/category/safety-compliance/) — the full safety and compliance section

Faster Deployment

Deployment speed is one of the J1600's defining results. Where a conventional automation project is measured in weeks or months, a standard J1600 goes to work in hours to one day, with operators [trained in about 30 minutes](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>).

The deployment numbers

Milestone	Time
First autonomous task by a first-time user	Within roughly 15 minutes
Operator training (existing electric-pallet-jack operator)	About 30 minutes
Typical setup, depending on scope	Hours to one day
Adding a new destination later	Minutes — drive there and tap Save location

These times were [demonstrated publicly](https://info.mobilerobot.com/applications/customer-stories/video-case-stories/) (<https://info.mobilerobot.com/applications/customer-stories/video-case-stories/>): at an industry test event, a first-time user who had only ever driven ordinary electric pallet jacks saved a location, created a drop-and-return task, confirmed automatic mode, and watched the robot navigate around people.

Why it is fast

- **No infrastructure.** [3D LiDAR SLAM navigation](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>) needs no tracks, wires, reflectors, or building modifications. The robot learns the facility while an operator drives it.
- **No IT project.** [Wi-Fi is optional for basic use](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>); no warehouse-management-system, fleet-manager, or IT integration is required.
- **No code.** Tasks are created on the 15-inch touchscreen with [teach-and-repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>): drive to a point, save it, combine saved points into tasks.

- **Familiar tool.** In manual mode the J1600 handles like a conventional walk-behind electric pallet jack, so existing operators start from what they know.
- **Ready out of the box.** The standard product is usable on delivery, with an on-device tutorial.

Structured go-live when you want it

For sites that prefer a formal project, an optional five-day [installation and commissioning package](https://info.mobilerobot.com/products/buying-and-deployment/installation-and-commissioning/) (€10,000 end-user list price) covers pre-installation feasibility, risk assessment and project planning, setup with up to 25 validated drop points, task and safety validation, group and individual operator training for up to six operators, monitoring, troubleshooting, acceptance testing, and handover. This is a go-live risk-reduction service — not a prerequisite for using the machine.

Low-risk evaluation first

A [two-week paid trial](https://info.mobilerobot.com/products/buying-and-deployment/two-week-trial/) (€4,000 including setup and support) puts a robot into your own flow with a full day of on-site deployment and training support, unlimited remote support, and free return at any time. See the [FAQ on product capabilities](https://info.mobilerobot.com/support/fag/product-and-capabilities/) and the [products section](https://info.mobilerobot.com/category/products/) for purchase paths.

Related pages

- [Lower integration complexity](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) — why there is no systems project
- [Operational flexibility](https://info.mobilerobot.com/applications/results/operational-flexibility/) — staying fast after go-live
- [E-commerce and fulfillment](https://info.mobilerobot.com/applications/industries/e-commerce-and-fulfillment/) — where deployment speed matters most

Lower Integration Complexity

Integration effort is the hidden cost of most automation projects. The J1600 is designed so that basic operation requires none of it — and so that [integration remains available, as an option](https://info.mobilerobot.com/documentation/technical-integration/integration-overview/) (<https://info.mobilerobot.com/documentation/technical-integration/integration-overview/>), when a site grows into it.

What the J1600 does not require

- **No mandatory Wi-Fi.** The basic out-of-box workflow runs [without a network connection](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>).
- **No warehouse-management-system or fleet-manager dependency.** Tasks are created and launched on the robot's own touchscreen.
- **No infrastructure changes.** [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>) replaces tracks, wires, reflectors, and marked target zones; certified safe reversing works without specially marked zones.
- **No code and no expert configuration.** [Teach-and-repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>) setup is performed by the operator; new locations are saved by driving to them.
- **No integration project for changes.** [Layout changes](https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/) (<https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/>) are handled on the floor, in minutes.

This is what "works out of the box" means concretely: the machine is usable on delivery, and the standard software is deliberately reduced to essential functions.

The cost this avoids

Removing the human from the last part of pallet work is what drives integration cost in full automation: the system then needs warehouse-management-to-fleet-manager integration, precise load data, controlled processes, and expert configuration — investments that can reach approximately €1 million for a fully integrated system. By keeping the operator for judgment tasks, the [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>) approach avoids that entire integration layer while capturing [up to 80% of the labor benefit](https://info.mobilerobot.com/applications/results/productivity-improvement/) (<https://info.mobilerobot.com/applications/results/productivity-improvement/>).

ovements/). See [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/>).

Integration when you want it

Lower complexity does not mean a dead end. One J1600 hardware platform supports [two software versions](https://info.mobilerobot.com/products/software/software-comparison/) (<https://info.mobilerobot.com/products/software/software-comparison/>):

- **Standard software** (<https://info.mobilerobot.com/products/software/standard-software/>) — configuration-free teach-and-repeat for single-unit deployments.
- **Advanced software** (<https://info.mobilerobot.com/products/software/advanced-software/>) (€14,500 end-user list upgrade) — adds VDA 5050 interoperability, a [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/>) (€6,500 per robot), advanced mission planning, and [integration with other software and equipment](https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/) (<https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/>).

[VDA 5050](https://info.mobilerobot.com/products/software/vda-5050/) (<https://info.mobilerobot.com/products/software/vda-5050/>) is fully supported, and the company works with established VDA 5050 fleet-management providers — so a J1600 can join a multi-vendor fleet under a compatible fleet layer when orchestration becomes worthwhile. The upgrade is easiest to install at the factory when the robot is ordered; a partner can perform it later.

UPGRADE INSTALLATION

The Advanced software upgrade is installed at the factory or by a partner. It is not customer-installable.

Related pages

- [Faster deployment](https://info.mobilerobot.com/applications/results/faster-deployment/) (<https://info.mobilerobot.com/applications/results/faster-deployment/>) — the go-live speed this enables
- [Operational flexibility](https://info.mobilerobot.com/applications/results/operational-flexibility/) (<https://info.mobilerobot.com/applications/results/operational-flexibility/>) — staying uncommitted to fixed processes
- [ROI examples](https://info.mobilerobot.com/applications/results/roi-examples/) (<https://info.mobilerobot.com/applications/results/roi-examples/>) — the cost comparison with integrated systems

- Third-party logistics (<https://info.mobilerobot.com/applications/industries/third-party-logistics/>) — a segment where integration overhead is fatal

Operational Flexibility

Flexibility is the property full automation usually trades away. The J1600 is designed to keep it: manual control is always one grab of the tiller away, and the automated flow is reconfigured by the operator in minutes, not by an engineer in weeks.

Why flexibility is the requirement, not a luxury

[Observations from a visit to a major e-commerce cross-docking facility](https://info.mobilerobot.com/newsroom/stories/behind-the-scenes/) (<https://info.mobilerobot.com/newsroom/stories/behind-the-scenes/>), shaped this [design philosophy](https://info.mobilerobot.com/company/about/our-approach-to-automation/) (<https://info.mobilerobot.com/company/about/our-approach-to-automation/>): even in a heavily automated, high-performing operation, layout, flow, buffer, and SKU-mix changes occurred several times per week, minor mechanical downtime occurred several times per day, and not every process was automated. The conclusion: flexibility and robustness are business necessities even at the top end of automation — and far more so in the SME facilities the J1600 targets.

The flexibility mechanisms

- **Immediate manual takeover.** Grabbing or moving the tiller returns the vehicle to manual control at once. [Exceptions](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/) (<https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/>) never wait on a system.
- **Dual-mode handling.** Truck unloading, [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/>) (open cages, barrels, wrapped goods), confined maneuvering, and dock plates are handled manually; the repetitive travel runs autonomously. See [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>).
- **Reconfiguration in minutes.** [Destinations are created by driving to a point](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>) and tapping **Save location** — no software limit on their number. Locations recombine into new tasks without teaching every origin-destination pair.
- **Brownfield navigation** (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>). [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>) continuously updates the environment model and routes around obstacles, so moved racking, staged pallets, and people do not break the

flow. No fixed infrastructure means nothing physical to re-install after a [layout change](https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/) (<https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/>).

- **Task variety.** [Boomerang \(deliver and return\)](https://info.mobilerobot.com/application/s/scenarios/deliver-and-return/) (<https://info.mobilerobot.com/application/s/scenarios/deliver-and-return/>), [simple ABC](https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/) (<https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/>), [drop-and-wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/>), [deliver-and-park](https://info.mobilerobot.com/applications/scenarios/deliver-and-park/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-park/>), and [multi-point combinations](https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/) (<https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/>) cover changing flows; [come-to-me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>) (an advanced function) calls the robot on demand.
- **Optional, not mandatory, integration.** Standard use has no Wi-Fi, WMS, or fleet dependency to constrain process changes; [VDA 5050](https://info.mobilerobot.com/products/software/vda-5050/) (<https://info.mobilerobot.com/products/software/vda-5050/>) and APIs are added only when wanted.

Flexibility in load handling

The [carrier envelope](https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/) (<https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/>) is deliberately broad: EPAL Euro Pallet, EPAL 3, EPAL 6, open-base GMA pallets, open cages, barrels on open-base carriers — any forkable open-base carrier within 1,250 × 1,250 mm and 1,600 kg. Operator judgment covers the edge cases no compatibility table can, which is the point of keeping a [human in the loop](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/) (<https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/>).

One tool, two jobs

Because the J1600 is also a fully functional manual electric pallet jack ([manual picks and drops up to 1,600 mm](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>)), it never sits idle when the automated flow pauses — it is simply used manually. This [one-tool utilization](https://info.mobilerobot.com/applications/scenarios/mixed-manual-and-autonomous-work/) (<https://info.mobilerobot.com/applications/scenarios/mixed-manual-and-autonomous-work/>) contrasts with dedicated automation that only earns its keep while its programmed process runs.

Related pages

- [Lower integration complexity](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>) — the systems side of staying flexible

- Faster deployment (<https://info.mobilerobot.com/applications/results/faster-deployment/>) — flexibility at go-live
- Third-party logistics (<https://info.mobilerobot.com/applications/industries/third-party-logistics/>) and E-commerce and fulfillment (<https://info.mobilerobot.com/applications/industries/e-commerce-and-fulfillment/>), — the fastest-changing environments

ROI Examples

The J1600's return-on-investment case rests on [list prices](https://info.mobilerobot.com/products/j1600/pricing-and-roi/) (<https://info.mobilerobot.com/products/j1600/pricing-and-roi/>), labor savings on repetitive transport, and economics designed for single-shift operations. This page collects the numbers.

The investment side

2026 end-user list prices:

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

Typical configurations:

- J1600 + manual charger + commissioning: **€78,600** list.
- J1600 + automatic charger + commissioning: **€83,400** list.

A typical customer configuration is expected to land around or below €80,000 — which corresponds to the manual-charger configuration. The €65,000 base price does not include a charger.

The comparison point

Full automation of the same task — removing the human entirely — typically requires warehouse-management-system-to-fleet-manager integration, infrastructure, and expert configuration, an investment that can reach approximately €1 million. The J1600 proposition is deliberately different: not 100% automation, but up to 80% of the labor benefit on repetitive transport, at a fraction of the price, running within hours. See [productivity improvements](https://info.mobilerobot.com/applications/results/productivity-improvements/) (https://info.mobilerobot.com/applications/results/productivity-improvements/).

The return side

- **Labor.** Up to 80% reduction in operator time on the repetitive transport the robot takes over. The economics are designed to work for a single-shift SME operating eight hours per day, five days per week, with one to five pallet-jack operators — no 24/7 operation needed for the numbers to work.
- **Immediate start.** Setup in hours to one day and about 30 minutes of [operator training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (https://info.mobilerobot.com/documentation/getting-started/operator-training/), mean the payback clock starts almost immediately; see [faster deployment](https://info.mobilerobot.com/applications/results/faster-deployment/) (https://info.mobilerobot.com/applications/results/faster-deployment/).
- **Low evaluation risk.** The €4,000 [two-week trial](https://info.mobilerobot.com/products/buying-and-deployment/two-week-trial/) (https://info.mobilerobot.com/products/buying-and-deployment/two-week-trial/), with free return at any time, prices the decision risk before the main investment.

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 from removing repetitive walking;
- improved inventory tracking and control in an automated process;
- steadier material flow and throughput;
- more productive use of skilled labor and easier response to labor shortages;
- less implementation and change risk than rigid full automation.

SITE-SPECIFIC PAYBACK

There is no standard payback model. Actual ROI depends on local wages, utilization, route lengths, shift patterns, and maintenance choices — figures a partner can help model for a specific site.

Related pages

- [Lower integration complexity](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>) — the avoided project costs
- [Labor reallocation](https://info.mobilerobot.com/applications/results/labor-reallocation/) (<https://info.mobilerobot.com/applications/results/labor-reallocation/>) — where the saved hours go
- [J1600 overview](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>) and the [products section](https://info.mobilerobot.com/category/products/) (<https://info.mobilerobot.com/category/products/>) — what the investment buys

Application Planning

How to assess whether the J1600 fits your site, loads, and routes — and how to plan a demonstration, trial, proof of concept, or full deployment.



Is the J1600 Right for My Application?

A fit assessment for the J1600 self-driving pallet jack — which pallet flows, facilities, loads, and team sizes it suits, what stays manual, and which applications are a poor fit.



Application Qualification Checklist

A point-by-point checklist for qualifying a J1600 application — load and carrier limits, floor and environment requirements, route conditions, process fit, and team readiness.



Site Suitability

Facility requirements for the J1600 — temperature, humidity, ingress protection, floor quality, space and clearance dimensions, charging locations, and connectivity.



Pallet and Load Suitability

Which pallets and load carriers the J1600 supports — the open-base requirement, the 1,250 x 1,250 mm size envelope, EPAL and GMA compatibility, fork dimensions, and the role of operato...



Route and Floor Suitability

[How to assess J1600 routes and floors — level-floor requirement for autonomous mode, bump and gap limits, floor flatness, clearances, route lengths, and how saved locations recombine...](#)



Trial Planning

[How to plan a two-week paid J1600 trial — what the €4,000 trial includes, the feasibility assessment, the on-site deployment day, weekly check-ins, and how to prepare your site and...](#)



Proof-of-Concept Planning

[How to plan a J1600 proof of concept — testing at the Copenhagen demo area, bringing machines to your own plant, choosing what to validate, and how a POC differs from a demo or...](#)



Deployment Scope Examples

[Three J1600 deployment scopes compared — out-of-the-box single unit, the five-day installation and commissioning package, and scaled deployments with Advanced software,...](#)

Is the J1600 Right for My Application?

The J1600 is a dual-mode [self-driving pallet jack](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>), for indoor, floor-to-floor pallet transport. This page helps you decide quickly whether it fits your operation before you invest time in a demonstration or trial. For the full specification, see [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

The application the J1600 is built for

The J1600 automates the repetitive travel portion of pallet transport. The operator [picks up the pallet manually](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>) — with a tiller that handles like a conventional electric pallet jack — selects a saved destination on the touchscreen, [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 robot drives to the destination, drops the pallet at floor level, and then returns, parks, waits, or continues to another point. 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/>).

The intended balance is roughly 80% automation rather than 100%: judgment stays with the operator, travel goes to the robot, and the entry cost stays far below a full automation project.

Strong fit indicators

The J1600 suits your application if several of these apply:

- **Horizontal, indoor pallet flows** in [goods receiving](https://info.mobilerobot.com/applications/industries/goods-receiving/) (<https://info.mobilerobot.com/applications/industries/goods-receiving/>), storage, [production supply](https://info.mobilerobot.com/applications/use-cases/production-supply/) (<https://info.mobilerobot.com/applications/use-cases/production-supply/>), [staging](https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/) (<https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/>), [cross-docking](https://info.mobilerobot.com/applications/use-cases/cross-docking/) (<https://info.mobilerobot.com/applications/use-cases/cross-docking/>), or [shipping](https://info.mobilerobot.com/applications/industries/shipping-and-dispatch/) (<https://info.mobilerobot.com/applications/industries/shipping-and-dispatch/>).
- **One to five pallet-jack operators** on a single shift — the [primary target segment](https://info.mobilerobot.com/company/about/markets-we-serve/) (<https://info.mobilerobot.com/company/about/markets-we-serve/>). The economics are

designed to work for a single-shift SME running eight hours per day, five days per week.

- **Repetitive point-to-point transport** where operators spend significant time [walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) (<https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/>). Routes can be a few meters or more than 100 meters.
- **Local work cells inside a larger site** (<https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/>) that are too small or too changeable for a conventional fleet project.
- **Brownfield facilities** (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>) with changing layouts, [temporary storage](https://info.mobilerobot.com/applications/use-cases/temporary-storage/) (<https://info.mobilerobot.com/applications/use-cases/temporary-storage/>), and variable SKU mix. The [3D LiDAR SLAM navigation](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>) needs no tracks, wires, reflectors, or building modifications.
- **A need for fast deployment** (<https://info.mobilerobot.com/applications/results/faster-deployment/>) — typical setup takes hours to one day, and [operator training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>) takes about 30 minutes.
- **No appetite for an IT project** — [Wi-Fi is optional for basic use](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>), and [no warehouse-management-system or fleet integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>) is required.

Requirements at a glance

Requirement	Limit
Load weight	Up to 1,600 kg (about 3,500 lb)
Load carrier	Open base, no bottom deck board
Pallet/load footprint, including overhang	Up to 1,250 x 1,250 mm (49 x 49 in)
Load height from floor	Up to 1,700 mm (67 in)
Environment	Indoor, 5–40°C (41–104°F), 20–80% relative humidity non-condensing
Floors in autonomous mode	Level (0% gradeability), bumps up to 25 mm, gaps up to 20 mm
Autonomous delivery	Floor level only
Pallet pickup	Always manual

Work through the [application qualification checklist](https://info.mobilerobot.com/applications/planning/application-qualification-checklist/) (<https://info.mobilerobot.com/applications/planning/application-qualification-checklist/>) for the complete list, and see [site suitability](https://info.mobilerobot.com/applications/planning/site-suitability/) (<https://info.mobilerobot.com/applications/planning/site-suitability/>), [pallet and load suitability](https://info.mobilerobot.com/applications/planning/pallet-and-load-suitability/) (<https://info.mobilerobot.com/applications/planning/pallet-and-load-suitability/>), and [route and floor suitability](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/) (<https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/>) for detail.

What stays manual

Dual mode assumes [an operator remains available for the judgment-heavy parts of pallet work](https://info.mobilerobot.com/safety-compliance/safe-deployment/operator-responsibilities/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/operator-responsibilities/>):

- pallet pickup and fork placement;
- lifts and drops above floor level, up to 1,600 mm, in [manual mode](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>);
- dock plates, ramps, and slopes — automatic-mode gradeability is 0%;

- [unstable, damaged, 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/>);
- [crowded or cluttered areas](https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/) (<https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/>) that call for improvisation;
- urgent reprioritization and [exceptions](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/) (<https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/>).

If your process requires removing the operator entirely — including automated pickup — the J1600 is not designed for that. It occupies the tier between manual pallet jacks and fully automated systems.

Poor fits

- outdoor transport or unheated areas below 5°C, including cold storage at freezing temperatures;
- closed-deck pallets or carriers the forks cannot enter;
- loads over 1,600 kg or larger than the 1,250 x 1,250 mm envelope;
- autonomous delivery to racking, conveyors, or any height above floor level;
- routes that must cross slopes or dock plates in autonomous mode;
- wet or washdown environments — the [ingress protection rating is IP21](https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/) (<https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/>).

Some of these applications can still work in part: the robot handles the level, indoor travel leg while operators handle the rest manually.

Next steps

1. Complete the [application qualification checklist](https://info.mobilerobot.com/applications/planning/application-qualification-checklist/) (<https://info.mobilerobot.com/applications/planning/application-qualification-checklist/>).
2. Book a 30–60 minute hands-on demonstration [through a partner](https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/) (<https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/>).
3. Plan a [two-week trial](https://info.mobilerobot.com/applications/planning/trial-planning/) (<https://info.mobilerobot.com/applications/planning/trial-planning/>) 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 your own site.

Application Qualification Checklist

Use this checklist to qualify a J1600 application before a demonstration, trial, or purchase. Every item maps to a published limit or requirement. If you can answer yes to each applicable point, the application is a candidate for a [two-week trial](https://info.mobilerobot.com/applications/planning/trial-planning/); items you cannot confirm are the first things to validate in a [proof of concept](https://info.mobilerobot.com/applications/planning/pr-oof-of-concept-planning/).

Load and carrier

- ☐ Load weight is 1,600 kg (about 3,500 lb) or less.
- ☐ The carrier has an open base with no bottom deck board, so forks can enter.
- ☐ Pallet or load footprint, including overhang, is within 1,250 x 1,250 mm (49 x 49 in).
- ☐ Load height from the floor is 1,700 mm (67 in) or less.
- ☐ The carrier type is supported: EPAL Euro Pallet, EPAL 3, EPAL 6, GMA pallets with an open base, or another forkable open-base carrier within the size limits.
- ☐ Loads are stable enough for transport, or an operator can judge and handle [unstable loads](https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-load-s/) manually.

Details: [Pallet and load suitability](https://info.mobilerobot.com/applications/planning/pallet-and-load-suitability/).

Facility and environment

- ☐ All autonomous routes are indoors.
- ☐ Ambient temperature stays within 5–40°C (41–104°F).
- ☐ Relative humidity stays within 20–80%, non-condensing.
- ☐ The environment is compatible with IP21 ingress protection — no washdown, spray, or standing water on the route.
- ☐ There is room for the vehicle: 1,893 mm long, 850 mm wide, 2,060 mm high with forks lowered, with a 1,501 mm turning radius.
- ☐ [A charging location is available](https://info.mobilerobot.com/documentation/installation/charger-installation/) — a wall outlet for the manual charger, or floor space for the optional

automatic charging station.

Details: [Site suitability](https://info.mobilerobot.com/applications/planning/site-suitability/) (https://info.mobilerobot.com/applications/planning/site-suitability/).

Floors and routes

- ☐ Autonomous routes are level — automatic-mode gradeability is 0%.
- ☐ Bumps along the route are 25 mm (1 in) or lower.
- ☐ Gaps along the route are 20 mm (0.8 in) or narrower.
- ☐ Floor flatness meets TR34 FM3 (FF 25 / FL 20).
- ☐ Dock plates, ramps, and slopes are handled manually — manual-mode gradeability is 5% unloaded and 3% at full load.
- ☐ Transport is floor-to-floor: pickup by the operator, autonomous drop at floor level.

Details: [Route and floor suitability](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/) (https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/).

Process and tasks

- ☐ The repetitive work is point-to-point travel between locations that can be saved by driving there once.
- ☐ [An operator is available to pick up pallets manually and initiate tasks](https://info.mobilerobot.com/safety-compliance/safe-deployment/operator-responsibilities/) (https://info.mobilerobot.com/safety-compliance/safe-deployment/operator-responsibilities/) — pickup is always manual.
- ☐ The intended [task patterns](https://info.mobilerobot.com/documentation/user-guides/task-management/) (https://info.mobilerobot.com/documentation/user-guides/task-management/) are covered: [deliver and return](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) (https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) (boomerang), deliver then [continue to a third point](https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/) (https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/), [drop and wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/) (https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/), [deliver and park](https://info.mobilerobot.com/applications/scenarios/deliver-and-park/) (https://info.mobilerobot.com/applications/scenarios/deliver-and-park/), or [multi-point flows](https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/) (https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/) such as [cross-docking](https://info.mobilerobot.com/applications/use-cases/cross-docking/) (https://info.mobilerobot.com/applications/use-cases/cross-docking/).
- ☐ Floor-level drop-off is acceptable at every autonomous destination.

Connectivity and integration

- ☐ Basic use [requires no integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>) — confirm Wi-Fi is available only if you want [connected features](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>).
- ☐ If you plan fleet operation, third-party fleet managers, or system integration, note that [VDA 5050](https://info.mobilerobot.com/products/software/vda-5050/) (<https://info.mobilerobot.com/products/software/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/documentation/technical-integration/fleet-manager-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/>), and advanced mission planning require the [Advanced software package](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>). See [Deployment scope examples](https://info.mobilerobot.com/applications/planning/deployment-scope-examples/) (<https://info.mobilerobot.com/applications/planning/deployment-scope-examples/>).

Team

- ☐ Operators are familiar with electric pallet jacks — [training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>) for the J1600 takes about 30 minutes.
- ☐ Someone on the team can [add or change destinations by driving to a point](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>) and tapping **Save location** — no automation expert is needed.

What the checklist does not cover

Hazardous materials and unusual carriers have 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/>); suitability depends on base geometry, size, stability, and operator judgment. Discuss special loads with your partner or the technical team, and validate them during the trial. If you are unsure whether the J1600 fits at all, start with [Is the J1600 right for my application?](https://info.mobilerobot.com/applications/planning/is-the-j1600-right-for-my-application/) (<https://info.mobilerobot.com/applications/planning/is-the-j1600-right-for-my-application/>).

Site Suitability

The J1600 is designed for existing indoor facilities and needs no building modifications, tracks, wires, or reflectors. A site still has to meet a set of environmental and physical requirements for autonomous operation. This page lists them so you can assess a facility before a trial or deployment.

PRELIMINARY SPECIFICATIONS

The January 2026 specifications on this page are preliminary and subject to change. Confirm limits against current product documentation before a deployment decision.

Environment

Parameter	Requirement
Location	Indoor
Operating temperature	5–40°C (41–104°F)
Relative humidity	20–80%, non-condensing
Ingress protection	IP21 — protected against objects over 12.5 mm and vertically dripping water

IP21 rules out washdown areas, spray, and standing water on the route. Unheated spaces that drop below 5°C — including frozen storage — are outside the [operating range](https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/) (<https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/>).

Floors

Parameter	Requirement
Gradeability, automatic mode	0° / 0% — level floors only
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)
Floor flatness/levelness	TR34 FM3 (FF 25 / FL 20)

Autonomous mode is a level-floor application. Dock plates and slopes remain manual tasks. For route-level assessment, see [Route and floor suitability](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/) (<https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/>).

Space and clearances

Plan aisles, doorways, and turning areas around [the vehicle's dimensions](https://info.mobilerobot.com/documentation/technical-reference/dimensions/) (<https://info.mobilerobot.com/documentation/technical-reference/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
Turning radius	1,501 mm	59 in
Ground clearance	30 mm	1.2 in

The 3D navigation LiDAR scans environmental structures at heights reaching up to 70 m above the vehicle, so the robot localizes from the building itself — including in facilities with high ceilings.

Charging locations

Plan one of [two charging arrangements](https://info.mobilerobot.com/documentation/user-guides/charging/) (<https://info.mobilerobot.com/documentation/user-guides/charging/>):

- **Manual charging:** a charger is plugged in during breaks or idle time, the same way an electric pallet jack is charged. Reserve a [parking spot](https://info.mobilerobot.com/applications/scenarios/deliver-and-park/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-park/>), near an outlet.
- **[Automatic charging](https://info.mobilerobot.com/applications/scenarios/automatic-charging/)** (<https://info.mobilerobot.com/applications/scenarios/automatic-charging/>): with the optional automatic charger, the robot drives to the station and docks itself for opportunity charging. [Reserve floor space for the station](https://info.mobilerobot.com/documentation/installation/charger-installation/) (<https://info.mobilerobot.com/documentation/installation/charger-installation/>); setup is part of installation Day 1 when the automatic charger is purchased.

The battery is a [24 V, 200 Ah lithium iron phosphate \(LiFePO₄\) unit](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/>) that charges at approximately 47 percentage points per hour. Runtime exceeds eight hours in a typical duty cycle. See [Charging details](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Connectivity

[Wi-Fi is optional for basic use](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>), and [no warehouse-management-system, fleet manager, or IT integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>) is mandatory. Sites planning fleet operation or software integration need network coverage for the [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>) features; see [Deployment scope examples](https://info.mobilerobot.com/applications/planning/deployment-scope-examples/) (<https://info.mobilerobot.com/applications/planning/deployment-scope-examples/>).

Real-world site conditions

The J1600 is validated at the company's [Copenhagen test facility](https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/) (<https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/>) under intentionally imperfect conditions, including uneven flooring and water-filled test loads. Dynamic obstacles, people, and changing layouts are handled by [3D LiDAR SLAM navigation with obstacle avoidance](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>) — but the limits above still apply. If your site is near a limit, validate it in a [trial](https://info.) (<https://info.>

[mobilerobot.com/applications/planning/trial-planning/](https://info.mobilerobot.com/applications/planning/trial-planning/)) or [proof of concept \(https://info.mobilerobot.com/applications/planning/proof-of-concept-planning/\)](https://info.mobilerobot.com/applications/planning/proof-of-concept-planning/).

Pallet and Load Suitability

The J1600 carries up to 1,600 kg on any forkable carrier with an open base. This page defines the load envelope, the supported pallet types, and the fork geometry you need to verify your own carriers against.

PRELIMINARY SPECIFICATIONS

The January 2026 specifications on this page are preliminary and subject to change. Confirm limits against current product documentation before a deployment decision.

The one hard requirement: an open base

The carrier must have an **open base with no bottom deck board** so the forks can enter. Closed-deck pallets are not supported. Beyond that, the carrier must fit the envelope below.

Load envelope

Parameter	Limit
Maximum load weight	1,600 kg (about 3,500 lb)
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)

Overhang counts: measure the load, not just the pallet. The exact envelope is 1,250 mm; some overview material rounds it to 1.2 m.

Supported carrier types

Carrier	Support
EPAL Euro Pallet	Supported
EPAL 3	Supported
EPAL 6	Supported
GMA pallets	All GMA pallets with an open base
Custom carriers	Any forkable open-base carrier within the size limits

Custom carriers include [open cages, barrels on open-base carriers, and other load carriers beyond Euro pallets](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/>). Compatibility 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 — validate special loads with your partner, ideally during a [trial](https://info.mobilerobot.com/applications/planning/trial-planning/) (<https://info.mobilerobot.com/applications/planning/trial-planning/>).

Fork geometry

Check your carriers against the fork dimensions:

Parameter	Metric	Imperial
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
Fork height, lowest position	90 mm	3.5 in
Fork height, highest position	1,600 mm	63 in

Heights: manual versus autonomous

[Manual mode](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>) picks and drops at up to 1,600 mm (63 in). Autonomous delivery is always at floor level. Plan flows so every autonomous destination accepts a floor-level drop; any higher placement is an operator task. See [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>).

Sensitive and unstable loads

[Loads that need judgment](https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/) (<https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/>) — top-heavy stacks, leaning loads, damaged pallets, liquids, or barrels — are exactly what the dual-mode split is for. The operator handles pickup and close maneuvering manually, then hands the repetitive travel to autonomous mode. Load stability remains an operator judgment; a [load-detection sensor](https://info.mobilerobot.com/safety-compliance/safety-functions/load-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/load-detection/>) (Performance Level b) confirms the presence of a load. For the reasoning behind this division of work, see [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/>).

Next step

Work the numbers above into the [application qualification checklist](https://info.mobilerobot.com/applications/planning/application-qualification-checklist/) (<https://info.mobilerobot.com/applications/planning/application-qualification-checklist/>), and check the rest of your facility with [Site suitability](https://info.mobilerobot.com/applications/planning/site-suitability/) (<https://info.mobilerobot.com/applications/planning/site-suitability/>).

Route and Floor Suitability

Autonomous J1600 operation is a level-floor, indoor application. This page covers what a route must look like physically and how routes are created, so you can walk your facility and qualify every intended path.

PRELIMINARY SPECIFICATIONS

The January 2026 specifications on this page are preliminary and subject to change. Confirm limits against current product documentation before a deployment decision.

Floor requirements along the route

Parameter	Requirement
Gradeability, automatic mode	0° / 0% — level floors only
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)
Floor flatness/levelness	TR34 FM3 (FF 25 / FL 20)

Expansion joints, drain covers, and thresholds count against the bump and gap limits. Dock plates, ramps, and slopes are [manual territory](https://info.mobilerobot.com/documentation/user-guides/manual-operation/): an operator can take the vehicle up a 5% grade unloaded or 3% at full load, but no autonomous route may include a slope.

Clearances

Plan aisle widths, doorways, and turning areas around [these dimensions](https://info.mobilerobot.com/documentation/technical-reference/dimensions/):

Parameter	Metric	Imperial
Vehicle length	1,893 mm	75 in
Vehicle width	850 mm	33 in
Turning radius	1,501 mm	59 in
Vehicle height, forks lowered	2,060 mm	81 in

Top speed (<https://info.mobilerobot.com/products/j1600/dimensions-and-performance/>) is 5.4 km/h (1.5 m/s). The 360-degree safety field is speed-dependent and expands at higher speeds, and blue floor lights show the protected area around the vehicle. See **how J1600 safety works** (<https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/>).

How routes are created

There is no route programming. The J1600 maps the facility with **3D LiDAR SLAM** (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>), while an operator drives it manually, then plans its own paths:

1. Drive the vehicle through the facility with the tiller. It continuously learns and updates its 3D environment model.
2. Drive to each intended **drop point** (<https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/>) and tap **Save location**. There is no software limit to the number of saved locations.
3. Combine **saved locations** (<https://info.mobilerobot.com/documentation/user-guides/location-management/>) freely into tasks. The robot navigates to any saved point without teaching every possible origin-destination pair.

Because navigation needs no fixed tracks, wires, reflectors, or building changes, routes survive **layout changes** (<https://info.mobilerobot.com/applications/scenarios/dynamic-route-changes/>): the robot maps and avoids obstacles in dynamic environments, and preferred travel zones can be defined for safer routing through production areas.

Route length and traffic

A route can be a few meters or more than 100 meters — the working concept is the same. Along the route the robot detects and avoids obstacles and people; in a public

first-use demonstration it routed around bystanders on its own. [Persistently crowded or cluttered areas](https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/) (<https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/>), are still better handled manually: the operator improvises a path, then hands over to autonomous mode where the route is predictable. For the reasoning behind this split, see [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/>).

Walking your facility: a route checklist

- ☐ The route is entirely indoors and level.
- ☐ No bump over 25 mm, no gap over 20 mm anywhere on the path.
- ☐ No dock plate, ramp, or slope on any autonomous segment.
- ☐ Doorways and aisles clear the 850 mm width with working margin, and turning points accommodate the 1,501 mm turning radius.
- ☐ Every autonomous destination accepts a floor-level pallet drop.
- ☐ Floor quality meets TR34 FM3 (FF 25 / FL 20), or the route will be validated during a trial.

Confirm the rest of the facility with [Site suitability](https://info.mobilerobot.com/applications/planning/site-suitability/) (<https://info.mobilerobot.com/applications/planning/site-suitability/>), then plan a [trial](https://info.mobilerobot.com/applications/planning/trial-planning/) (<https://info.mobilerobot.com/applications/planning/trial-planning/>) on your own floors.

Trial Planning

A two-week paid trial puts a J1600 in your own facility, on your own pallets and routes, with setup and support included. The trial is the standard second step of the evaluation journey, after a hands-on demonstration and before a purchase decision. The customer can return the robot at any time, free, no questions asked.

Trial at a glance

Item	Detail
Duration	14 calendar days
Price	€4,000 end-user list, including setup and support
Deployment	One full day of on-site deployment and training support
Support	Unlimited remote support during the trial
Follow-up	Weekly online or face-to-face check-in by the partner
Exit	Free return at any time, no questions asked

What the trial includes

- 1. Pre-trial feasibility assessment.** Before [the robot arrives](https://info.mobilerobot.com/documentation/getting-started/delivery-and-unpacking/) (<https://info.mobilerobot.com/documentation/getting-started/delivery-and-unpacking/>), the selected tasks are assessed for feasibility through a company-provided online tool, and the trial tasks are agreed.
- 2. Robot loan for 14 calendar days.**
- 3. One full day of on-site deployment and training.** The robot is set up, locations are saved, and operators are trained. [Training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>) an existing electric-pallet-jack operator takes about 30 minutes.
- 4. Unlimited remote support** from The Mobile Robot Company for the duration of the trial.

5. **Weekly check-ins** with your partner to assess trial progress against the agreed success criteria.

Before the trial: qualify and prepare

Get the most out of the 14 days by preparing before day one:

- Work through the [application qualification checklist](https://info.mobilerobot.com/applications/planning/application-qualification-checklist/) (<https://info.mobilerobot.com/applications/planning/application-qualification-checklist/>) and resolve open items.
- Walk the intended routes using the [route and floor checklist](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/) (<https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/>).
- Verify your pallets and carriers against [pallet and load suitability](https://info.mobilerobot.com/applications/planning/pallet-and-load-suitability/) (<https://info.mobilerobot.com/applications/planning/pallet-and-load-suitability/>) — an open base within 1,250 x 1,250 mm, up to 1,600 kg.
- Choose the transport tasks to automate. Good first candidates are repetitive point-to-point flows: [deliver-and-return](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>), [drop-and-wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/>), or a [receiving-to-storage leg](https://info.mobilerobot.com/applications/use-cases/inbound-receiving/) (<https://info.mobilerobot.com/applications/use-cases/inbound-receiving/>).
- Decide who operates the robot. Any electric-pallet-jack operator is a candidate; no automation background is needed.
- Reserve a [charging spot near an outlet](https://info.mobilerobot.com/documentation/installation/charger-installation/) (<https://info.mobilerobot.com/documentation/installation/charger-installation/>) for manual charging during breaks.

During the trial

The basic workflow is [teach and repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>): drive manually, save locations, [pick pallets manually, and send the robot on autonomous deliveries](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>) from the touchscreen. Measure what matters to your business case — operator time reclaimed on the automated legs, task consistency, and how easily your team [adds or changes locations without outside help](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>). The headline figure to test against is [up to 80% reduction in operator time on repetitive transport](https://info.mobilerobot.com/applications/results/productivity-improvements/) (<https://info.mobilerobot.com/applications/results/productivity-improvements/>).

Start with a demonstration

Before committing to a trial, take a 30–60 minute hands-on demonstration at a partner experience center or your own site. First-time visitors typically create and launch an autonomous task within about 15 minutes. A public video shows a first-time user doing exactly that; see [video case stories](https://info.mobilerobot.com/applications/customer-stories/video-case-stories/) (<https://info.mobilerobot.com/applications/customer-stories/video-case-stories/>).

After the trial

If the trial succeeds, the path continues to purchase — optionally with the five-day [installation and commissioning package](https://info.mobilerobot.com/applications/planning/deployment-scope-examples/) (<https://info.mobilerobot.com/applications/planning/deployment-scope-examples/>) for a structured go-live — and an [after-sales service plan](https://info.mobilerobot.com/support/faq/service-and-warranty/) (<https://info.mobilerobot.com/support/faq/service-and-warranty/>). If the application needs deeper validation first, plan a [proof of concept](https://info.mobilerobot.com/applications/planning/proof-of-concept-planning/) (<https://info.mobilerobot.com/applications/planning/proof-of-concept-planning/>). Trials are arranged through the partner network; inquiries via [mobilerobot.com](https://www.mobilerobot.com) (<https://www.mobilerobot.com>) are routed to [a local partner](https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/) (<https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/>).

Proof-of-Concept Planning

A proof of concept (POC) validates the J1600 against your specific application before a wider purchase or deployment. It sits alongside two other evaluation routes — the hands-on demonstration and the two-week paid trial — and is the right choice when an application needs deeper or more controlled validation than a standard trial provides.

Choosing the right evaluation route

Route	What it is	Where
Demonstration	30–60 minutes hands-on; first autonomous task typically within about 15 minutes	Partner experience center or customer site
Paid trial	14 calendar days on your own tasks, with deployment day and support included	Your facility
Proof of concept	Validation scoped to your application, agreed individually	Copenhagen demo area, or your plant

Demonstrations prove ease of use. Trials prove the robot in your daily operation. A POC proves a specific application question — for example an unusual load carrier, a demanding route, or a throughput target — before you commit further. See [Trial planning](https://info.mobilerobot.com/applications/planning/trial-planning/) (<https://info.mobilerobot.com/applications/planning/trial-planning/>).

Two places to run a POC

The Copenhagen demo and test area

Prospects can run tests 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/>). The facility is built for validation under intentionally real-world conditions: deliberately uneven flooring, water-filled test loads, and multiple test setups. Testing there is useful when you want to see your load types handled before moving anything into your own operation.

Your own plant

For a POC in your production environment, machines can be transported to your plant. The EMEA distributor and integrator network is experienced in running plant trials and POCs, and the sales and technical team scopes the test with you. POC scope, duration, and success criteria are agreed individually for each case.

What to validate in a POC

Focus the POC on the questions a demonstration cannot answer:

- **Loads:** your actual carriers against the open-base requirement and the 1,250 x 1,250 mm envelope — especially [open cages, barrels, or custom 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/>). See [Pallet and load suitability](https://info.mobilerobot.com/applications/planning/pallet-and-load-suitability/) (<https://info.mobilerobot.com/applications/planning/pallet-and-load-suitability/>).
- **Floors and routes:** real bumps, gaps, flatness, and clearances on the intended paths. See [Route and floor suitability](https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/) (<https://info.mobilerobot.com/applications/planning/route-and-floor-suitability/>).
- **Environment:** temperature, humidity, and traffic conditions at the actual workstations. See [Site suitability](https://info.mobilerobot.com/applications/planning/site-suitability/) (<https://info.mobilerobot.com/applications/planning/site-suitability/>).
- **Tasks:** the exact [task patterns](https://info.mobilerobot.com/documentation/user-guides/task-management/) (<https://info.mobilerobot.com/documentation/user-guides/task-management/>) you plan to run — [deliver-and-return](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>), [drop-and-wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/>), [multi-point flows](https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/) (<https://info.mobilerobot.com/applications/use-cases/multi-point-pallet-transport/>) — and the post-delivery behaviors.
- **People:** how quickly your operators reach independent use. [Training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>) takes about 30 minutes for an existing electric-pallet-jack operator.
- **Throughput:** whether the automated legs reclaim the operator time your business case assumes, against the up-to-80% claim for repetitive transport.

Setting success criteria

Define pass criteria before the POC starts: which tasks must run, at what consistency, handled by whom, and what evidence the decision needs. The weekly-check-in

structure of the paid trial is a good template. Agree the criteria with your partner and the technical team when scoping the POC.

Arranging a POC

[Contact the sales and technical team](https://info.mobilerobot.com/company/locations/contact-information/) (<https://info.mobilerobot.com/company/locations/contact-information/>) or [your local partner](https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/) (<https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/>). Inquiries via [mobilerobot.com](https://www.mobilerobot.com) (<https://www.mobilerobot.com>) are routed to the partner network. If the POC succeeds, the next step is purchase — with the optional structured go-live described in [Deployment scope examples](https://info.mobilerobot.com/applications/planning/deployment-scope-examples/) (<https://info.mobilerobot.com/applications/planning/deployment-scope-examples/>).

Deployment Scope Examples

J1600 deployments range from a single robot unboxed and working the same day to commissioned, multi-robot, fleet-integrated installations. This page describes three representative scopes so you can match the deployment effort to your application.

Scope 1: out of the box, single unit

The standard J1600 is [ready to use on delivery](https://info.mobilerobot.com/documentation/getting-started/delivery-and-unpacking/) (<https://info.mobilerobot.com/documentation/getting-started/delivery-and-unpacking/>). A 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:

- no building modifications, tracks, wires, or reflectors;
- 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/>);
- operator tutorial on the device or online;
- about 30 minutes of [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;
- [locations added by driving to a point](https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/) (<https://info.mobilerobot.com/applications/scenarios/temporary-location-setup/>) and tapping **Save location**;
- [manual charging](https://info.mobilerobot.com/documentation/user-guides/charging/) (<https://info.mobilerobot.com/documentation/user-guides/charging/>) with a wall charger during breaks.

This scope fits a [single work cell](https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/) (<https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/>), or one repetitive flow — for example [production supply](https://info.mobilerobot.com/applications/use-cases/production-supply/) (<https://info.mobilerobot.com/applications/use-cases/production-supply/>) from a staging area, or a [receiving-to-storage leg](https://info.mobilerobot.com/applications/use-cases/inbound-receiving/) (<https://info.mobilerobot.com/applications/use-cases/inbound-receiving/>). It is the standard scope for SMEs with one to five pallet-jack operators on a single shift.

Scope 2: commissioned deployment

The [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/>) (€10,000 end-user list) is an optional five-day service that reduces go-live risk through structured preparation, validation, and handover:

Phase	Content
Pre-installation	Feasibility check for all selected tasks and loads; risk assessment; project plan
Day 1	Unboxing; Wi-Fi connection if desired; automatic-charging setup if purchased; creation of up to 25 drop points; task validation; safety validation
Day 2	Group training for all operators; individual hands-on practice for up to six operators
Days 3–4	Performance monitoring; on-site troubleshooting and support; additional operator training as needed
Day 5	Acceptance test; handover

Available add-ons: integration with other software or equipment, additional validated drop points, and Fleet Management System setup. The package should not be confused with the machine's basic out-of-box usability — it is a commercial deployment service for sites that want a validated, accepted go-live.

This scope fits deployments with many drop points, multiple operators and shifts of training needs, formal [risk-assessment requirements](https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/>), or automatic charging.

Scope 3: scaled and integrated

When the application grows, the same hardware platform scales through [software and infrastructure options](https://info.mobilerobot.com/documentation/technical-integration/integration-overview/) (<https://info.mobilerobot.com/documentation/technical-integration/integration-overview/>):

- **Advanced software upgrade** (<https://info.mobilerobot.com/products/software/advanced-software/>) (€14,500 list): VDA 5050 interoperability, [REST API](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>), Fleet Manager compatibility, advanced mission planning, and advanced system integration. The upgrade is easiest to install at the factory when the robot is ordered; a partner can perform it later, but a customer cannot.
- **Fleet Manager** (<https://info.mobilerobot.com/products/software/fleet-manager/>) (€6,500 per robot, list): orchestrated multi-robot deployments.
- **VDA 5050** (<https://info.mobilerobot.com/products/software/vda-5050/>): full support, letting robots from different vendors work together under a compatible fleet layer.

The company works with established VDA 5050 fleet-management providers.

- **Automatic charging** (<https://info.mobilerobot.com/applications/scenarios/automatic-charging/>) (automatic charger €8,400 list; manual charger €3,600): the robot docks itself for opportunity charging, set up on installation Day 1 when purchased.
- **Come-to-me** (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>): calling the robot via a mobile app or web interface, an advanced automation function.

This scope fits multi-robot flows, sites with existing mixed-vendor fleets, and applications that need [WMS or equipment integration](https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/) (<https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/>). See [software details](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Matching scope to application

Application	Typical scope
One repetitive flow, one work cell, single shift	Out of the box
Cross-docking with many drop points	Commissioned
Formal acceptance and risk-assessment requirements	Commissioned
Multiple robots or mixed-vendor fleet	Scaled and integrated
High-utilization flows needing opportunity charging	Commissioned or scaled, with automatic charging

[Deployment](https://info.mobilerobot.com/documentation/installation/deployment-checklist/) (<https://info.mobilerobot.com/documentation/installation/deployment-checklist/>) starts with qualification: run the [application qualification checklist](https://info.mobilerobot.com/applications/planning/application-qualification-checklist/) (<https://info.mobilerobot.com/applications/planning/application-qualification-checklist/>), then validate with a [trial](https://info.mobilerobot.com/applications/planning/trial-planning/) (<https://info.mobilerobot.com/applications/planning/trial-planning/>) or [proof of concept](https://info.mobilerobot.com/applications/planning/proof-of-concept-planning/) (<https://info.mobilerobot.com/applications/planning/proof-of-concept-planning/>). Prices above are 2026 end-user list prices; a robot purchase itself [starts at €65,000](https://info.mobilerobot.com/products/j1600/pricing-and-roi/) (<https://info.mobilerobot.com/products/j1600/pricing-and-roi/>).

Partners

The partner program, becoming a partner, and partner resources.



Partner Program

7 pages



Become a Partner

5 pages



Partner Sales Resources

8 pages



Commercial Resources

7 pages



Deployment and Service

7 pages



Training and Certification

2 pages



Marketing Resources

3 pages



Partner Portal

1 page

Partner Program

How The Mobile Robot Company's partner channel works: the program model, partner roles and requirements, benefits, and how to apply.



Program Overview

How The Mobile Robot Company's partner program works — a partner-led sales channel in which partners deliver demonstrations, trials, deployment, and service, and the company...



Why Partner With Us

The commercial case for joining The Mobile Robot Company's partner network — a large and mostly manual pallet-transport market, an award-winning product, and a program built on...



Partner Types

The Mobile Robot Company's network includes distributors, integrators, and service partners. What the three profiles have in common, what kind of core business fits, and how applications...



Requirements

What The Mobile Robot Company requires of its partners — experience centers, stock, a full product and service offering, trained service technicians, a product Champion, and recurring...



Roles and Responsibilities

How work is divided between The Mobile Robot Company and its partners across the customer journey — demonstrations, trials, sales, installation, after-sales — plus how leads, customer...



Partner Benefits

What partners get from The Mobile Robot Company — a layered discount structure, service and software revenue, qualified leads, training, unlimited remote support, co-marketing funds, and ...



Application Process

How to apply to become a Mobile Robot Company partner — who can apply, how to express interest, what the company looks at, and what happens after acceptance.

Program Overview

The Mobile Robot Company sells the [J1600 self-driving pallet jack](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>) through an international network of distributors, integrators, and service partners. This page explains how that channel works: what partners do, what the company does, and how the two sides share the customer relationship.

A partner-led route to market

The company publishes [end-user list prices](https://info.mobilerobot.com/products/j1600/pricing-and-roi/) (<https://info.mobilerobot.com/products/j1600/pricing-and-roi/>) and lets customers request demonstrations, trials, and purchases online, but it does not sell robots directly to end users. Every customer inquiry is routed to a partner, who owns the local relationship from first demonstration through after-sales service.

By June 2026 the company had distributor partnerships in eight countries, and the network continues to expand. Partnerships are established country by country — see [Country Availability](https://info.mobilerobot.com/partners/become-a-partner/country-availability/) (<https://info.mobilerobot.com/partners/become-a-partner/country-availability/>).

Division of work

Partners deliver	The company provides
Local demonstrations at an experience center or customer site	Robots, spare parts, and software
Two-week paid trials	Technical support and training
Sales and customer ownership	Marketing materials and customer handouts
Installation and deployment	Company-generated leads
Field service and after-sales support	Joint business planning and co-marketing support

The service model is deliberate: partners keep the revenue from local human services such as installation, on-site support, and service agreements, while the company supplies parts, software, and paid engineering support to the partner. See [Roles and Responsibilities](https://info.mobilerobot.com/partners/program/roles-and-responsibilities/) (<https://info.mobilerobot.com/partners/program/roles-and-responsibilities/>).

The customer journey

The [go-to-market model](https://info.mobilerobot.com/company/about/business-model/) (<https://info.mobilerobot.com/company/about/business-model/>) is a four-step, low-risk customer journey:

1. **Demo** — 30 to 60 minutes of hands-on use at an experience center or customer site.
2. **Trial** — a two-week paid trial with free return at any time, no questions asked.
3. **Purchase** — the robot and [selected options](https://info.mobilerobot.com/products/chargers-and-accessories/available-options/) (<https://info.mobilerobot.com/products/chargers-and-accessories/available-options/>).
4. **After-sales service** — an ongoing service and maintenance agreement.

Repeat customers may skip the demo and trial, and the after-sales agreement is optional. Hands-on demonstration carries the model: a first-time visitor can typically send the robot on an autonomous task within about 15 minutes.

Non-exclusive and performance-based

The partner relationship is non-exclusive at partner level. Instead of territorial exclusivity, customer and site registration creates protected ownership of a specific customer — for a defined period after a demonstration, and permanently after a trial or purchase, subject to applicable law. Rewards are performance-based: effort and engagement drive returns. See [Roles and Responsibilities](https://info.mobilerobot.com/partners/program/roles-and-responsibilities/) (<https://info.mobilerobot.com/partners/program/roles-and-responsibilities/>) for how leads and registration work.

Program scope and terms

The program covers partner [requirements](https://info.mobilerobot.com/partners/program/requirements/) (<https://info.mobilerobot.com/partners/program/requirements/>), [benefits and commercial terms](https://info.mobilerobot.com/partners/program/partner-benefits/) (<https://info.mobilerobot.com/partners/program/partner-benefits/>), experience centers and demos, lead assignment, trials, installation and commissioning, after-sales plans, and [business planning and co-marketing](https://info.mobilerobot.com/partners/marketing-resources/co-marketing-program/) (<https://info.mobilerobot.com/partners/marketing-resources/co-marketing-program/>). Commercial terms are

time-sensitive; current prices, discounts, and conditions are available from the partner team.

Next steps

- [Why Partner With Us](https://info.mobilerobot.com/partners/program/why-partner-with-us/) (<https://info.mobilerobot.com/partners/program/why-partner-with-us/>) — the commercial case for joining.
- [Partner Types](https://info.mobilerobot.com/partners/program/partner-types/) (<https://info.mobilerobot.com/partners/program/partner-types/>) — distributors, integrators, and service partners.
- [Application Process](https://info.mobilerobot.com/partners/program/application-process/) (<https://info.mobilerobot.com/partners/program/application-process/>) — how to start the conversation.
- [Contact the Partner Team](https://info.mobilerobot.com/partners/become-a-partner/contact-the-partner-team/) (<https://info.mobilerobot.com/partners/become-a-partner/contact-the-partner-team/>)

Why Partner With Us

Partnering with [The Mobile Robot Company](https://info.mobilerobot.com/company/about/company-overview/) means selling automation into [the largest and least automated segment of intralogistics](https://info.mobilerobot.com/documentation/concepts/pallet-automation-fundamentals/) with a product designed to be demonstrated, deployed, and serviced by a local partner.

A large, mostly manual market

Pallet transport is a high-volume market with very little automation:

- more than one million pallet jacks are sold worldwide every year;
- more than 300,000 are sold in Europe annually;
- more than six million people use pallet jacks in their daily work;
- only about 1% of pallet handling is automated.

The [J1600](https://info.mobilerobot.com/products/j1600/overview/) targets [the remaining manual segment](https://info.mobilerobot.com/company/about/markets-we-serve/) — especially small and medium businesses with one to five pallet-jack operators and single-shift economics that a conventional automation project cannot reach. That is a customer group most automation vendors do not serve, and it is where a local partner's reach matters most.

An award-winning product

The J1600 won the [IFOY AWARD 2026 in the Industrial Truck of the Year category](https://info.mobilerobot.com/newsroom/awards/ifo-y-award-2026/), announced on 26 June 2026, after completing the three-stage IFOY Audit and receiving the [Best in Intralogistics Certificate](https://info.mobilerobot.com/newsroom/awards/best-in-intralogistics/). The award jury recognized it as a new product tier between manual pallet jacks and classic automated guided vehicles.

Its [dual-mode design](https://info.mobilerobot.com/products/j1600/dual-mode/) — a familiar manual electric pallet jack that also drives itself to saved locations — gives partners a product that is easy to explain, easy to demonstrate, and deployable in hours rather

than months. See the [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) for the full data.

A sales model built on demonstration

Hands-on experience is the strongest sales tool for this product. A first-time visitor to an experience center can typically create and launch an autonomous task within about 15 minutes, and a standard demonstration takes 30 to 60 minutes. [Public list prices](https://info.mobilerobot.com/products/j1600/pricing-and-roi/) remove pricing friction from early conversations, and the two-week paid trial with free return converts interest into deployments at low customer risk.

The company [does not sell directly to end users](https://info.mobilerobot.com/company/about/business-model/). Inquiries produced through the company's own marketing are assigned to partners — as a rule of thumb, to the partner with the nearest experience center.

Revenue on product, software, and service

The [program](https://info.mobilerobot.com/partners/program/program-overview/) is structured so that partners earn across the whole customer lifecycle:

- **Product margin** — partners buy at partner prices and sell at market. A layered discount structure rewards active selling and volume; see [Partner Benefits](https://info.mobilerobot.com/partners/program/partner-benefits/).
- **Software** — [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/), upgrades and [Fleet Manager](https://info.mobilerobot.com/products/software/fleet-manager/) licences are resold through partners.
- **Services** — partners may deliver installation, commissioning, on-site support, and trials themselves rather than reselling the company's service, keeping the human-service revenue local.
- **After-sales** — service and maintenance agreements flow through the partner, with the company supplying parts and software.

Backing from the company

Partners are not left alone with the product:

- qualified leads from company marketing;
- a two-day sales and service training workshop, with unlimited remote support afterwards;
- [marketing materials](https://info.mobilerobot.com/partners/marketing-resources/logos-and-brand-guidelines/) (<https://info.mobilerobot.com/partners/marketing-resources/logos-and-brand-guidelines/>), and customer handouts for demos and events;
- co-marketing funds for co-branded promotions, campaigns, and events — see the [Co-Marketing Program](https://info.mobilerobot.com/partners/marketing-resources/co-marketing-program/) (<https://info.mobilerobot.com/partners/marketing-resources/co-marketing-program/>);
- recurring joint business planning with a shared KPI dashboard;
- a one-time [starter package](https://info.mobilerobot.com/partners/become-a-partner/starter-package/) (<https://info.mobilerobot.com/partners/become-a-partner/starter-package/>), that equips a new partner with a demo robot, training, deployment support, and a local lead-generation campaign.

Ready to talk?

Read [Who We Are Looking For](https://info.mobilerobot.com/partners/become-a-partner/who-we-are-looking-for/) (<https://info.mobilerobot.com/partners/become-a-partner/who-we-are-looking-for/>), then start with the [Application Process](https://info.mobilerobot.com/partners/program/application-process/) (<https://info.mobilerobot.com/partners/program/application-process/>) or [contact the partner team](https://info.mobilerobot.com/partners/become-a-partner/contact-the-partner-team/) (<https://info.mobilerobot.com/partners/become-a-partner/contact-the-partner-team/>) directly.

Partner Types

The Mobile Robot Company's channel is built from three partner profiles: **distributors**, **integrators**, and **service partners**. Qualified organizations of all three kinds can apply, country by country, to [join the global network](https://info.mobilerobot.com/partners/program/why-partner-with-us/) (<https://info.mobilerobot.com/partners/program/why-partner-with-us/>).

Three profiles, one program

Rather than running separate tracks, the [program](https://info.mobilerobot.com/partners/program/program-overview/) (<https://info.mobilerobot.com/partners/program/program-overview/>) applies one set of expectations to every partner. Whether an organization primarily resells material-handling equipment, integrates automation into customer processes, or services fleets in the field, it participates in the same [customer journey](https://info.mobilerobot.com/company/about/business-model/) (<https://info.mobilerobot.com/company/about/business-model/>): demonstration, trial, purchase, and after-sales service.

The relationship is non-exclusive at partner level, so multiple partners can operate in the same market. Protection comes from customer registration rather than territory — see [Roles and Responsibilities](https://info.mobilerobot.com/partners/program/roles-and-responsibilities/) (<https://info.mobilerobot.com/partners/program/roles-and-responsibilities/>).

What every partner does

All partners are expected to:

- maintain at least one physical experience center where customers can try the [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>) hands-on;
- keep product in stock for immediate fulfillment;
- offer the full range of products and services, including paid trials and after-sales contracts;
- employ field-service technicians with current product training;
- appoint an internal product Champion as the resident expert and main contact;
- take part in proactive, recurring business planning with the company.

The full list is on [Requirements](https://info.mobilerobot.com/partners/program/requirements/) (<https://info.mobilerobot.com/partners/program/requirements/>).

A complementary core business

The program looks for organizations whose primary business naturally complements the robots — for example manual fork-truck businesses or automated-material-handling businesses. The J1600 is a dual-mode vehicle that behaves like a conventional electric pallet jack in manual mode, so companies that already sell, integrate, or service material-handling equipment can fold it into their existing offering, sales motion, and service organization. See [Dual Mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>).

Applying

[Applications are handled by country](https://info.mobilerobot.com/partners/become-a-partner/country-availability/) (<https://info.mobilerobot.com/partners/become-a-partner/country-availability/>), and the network is actively expanding. Read [Who We Are Looking For](https://info.mobilerobot.com/partners/become-a-partner/who-we-are-looking-for/) (<https://info.mobilerobot.com/partners/become-a-partner/who-we-are-looking-for/>) and follow the [Application Process](https://info.mobilerobot.com/partners/program/application-process/) (<https://info.mobilerobot.com/partners/program/application-process/>), or [contact the partner team](https://info.mobilerobot.com/partners/become-a-partner/contact-the-partner-team/) (<https://info.mobilerobot.com/partners/become-a-partner/contact-the-partner-team/>), directly.

Application Process

Qualified integrators, distributors, and service partners can apply to join The Mobile Robot Company's global network. Applications are handled by country. This page describes how the process works from first contact to onboarding.

Who can apply

The [program](https://info.mobilerobot.com/partners/program/program-overview/) (<https://info.mobilerobot.com/partners/program/program-overview/>) is open to organizations whose primary business naturally complements the robots — for example manual-fork-truck businesses or automated-material-handling businesses with an existing customer base and service capability. See [Who We Are Looking For](https://info.mobilerobot.com/partners/become-a-partner/who-we-are-looking-for/) (<https://info.mobilerobot.com/partners/become-a-partner/who-we-are-looking-for/>) and [Partner Types](https://info.mobilerobot.com/partners/program/partner-types/) (<https://info.mobilerobot.com/partners/program/partner-types/>).

Express interest

Start the conversation through either channel:

- the **Partner with us** section on www.mobilerobot.com (<https://www.mobilerobot.com>);
- email to the partner team at hello@mobilerobot.com.

Because partnerships are established country by country, state the country or countries you want to cover and describe your current business — what you sell, integrate, or service today. Full contact details are on [Contact the Partner Team](https://info.mobilerobot.com/partners/become-a-partner/contact-the-partner-team/) (<https://info.mobilerobot.com/partners/become-a-partner/contact-the-partner-team/>).

What the company looks at

The discussion centers on fit with the program's expectations:

- ability to run one or more physical experience centers with hands-on demonstrations;
- willingness to stock product for immediate fulfillment;

- capacity to offer the full range — sales, paid trials, installation, and after-sales contracts;
- field-service technicians who can be trained on the product;
- an internal product Champion;
- commitment to recurring joint business planning.

The detailed expectations are described in [Requirements](https://info.mobilerobot.com/partners/program/requirements/) (https://info.mobilerobot.com/partners/program/requirements/).

After acceptance

New partners are taken through a structured start:

- a joint first-phase business plan;
- a two-day sales and service training workshop, followed by unlimited remote support;
- the option to purchase the one-time [Starter Package](https://info.mobilerobot.com/partners/become-a-partner/starter-package/) (https://info.mobilerobot.com/partners/become-a-partner/starter-package/), which equips the experience center with a demo robot and includes training, on-site deployment support, and a geographically targeted lead-generation campaign.

The steps are described in the [Onboarding Process](https://info.mobilerobot.com/partners/become-a-partner/onboarding-process/) (https://info.mobilerobot.com/partners/become-a-partner/onboarding-process/).

Availability by country

The network covered eight countries as of June 2026 and is expanding. The company does not publish a list of covered countries; ask the partner team about the status of your market. See [Country Availability](https://info.mobilerobot.com/partners/become-a-partner/country-availability/) (https://info.mobilerobot.com/partners/become-a-partner/country-availability/).

Become a Partner

Who The Mobile Robot Company looks for in a partner, where the J1600 is available, and how a new partnership gets started.



Who We Are Looking For

The profile of a Mobile Robot Company partner — distributors, integrators, and service partners whose core business complements mobile robots, with demonstration capability, service...



Country Availability

Where the J1600 is available — worldwide sales through a partner network with distributors in eight countries as of June 2026, and what to check with a local partner before ordering.



Onboarding Process

What happens after a partner agreement is signed — joint business planning, the two-day training workshop, building the experience center, supported first deployments, and the first...



Starter Package

The one-time starter package for new Mobile Robot Company partners — a demo robot, manual charger, Advanced software, a two-day training workshop, five on-site support days, and a...



Contact the Partner Team

[How to reach The Mobile Robot Company about partnership — general contact channels, the EMEA partner contact, and what to include in a first message.](#)

Who We Are Looking For

[The Mobile Robot Company](https://info.mobilerobot.com/company/about/company-overview/) (<https://info.mobilerobot.com/company/about/company-overview/>) builds its channel from organizations that already live close to material handling. This page describes the profile that fits the [partner program](https://info.mobilerobot.com/partners/program/program-overview/) (<https://info.mobilerobot.com/partners/program/program-overview/>).

A complementary core business

The strongest candidates are organizations whose primary business naturally complements the robots:

- **manual-fork-truck businesses** — dealers and service organizations for conventional pallet jacks and forklifts;
- **automated-material-handling businesses** — integrators and suppliers of warehouse automation.

The [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>) is a [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>) vehicle: in manual mode it behaves like a conventional electric pallet jack, and in automatic mode it drives itself to saved locations. Organizations from either side of that line — manual equipment or automation — can sell, deploy, and service it with the capabilities they already have.

Three partner profiles

Qualified **distributors**, **integrators**, and **service partners** can all apply. The program applies the same expectations to each profile; see [Partner Types](https://info.mobilerobot.com/partners/program/partner-types/) (<https://info.mobilerobot.com/partners/program/partner-types/>).

What we expect you can build

A partner should be able to establish and sustain:

- one or more physical experience centers where customers get hands-on with the robot — shared showroom space is acceptable;

- product in stock for immediate fulfillment;
- the full offering: demonstrations, paid trials, sales, installation, and after-sales contracts;
- field-service technicians trained on the product;
- an internal product Champion as the resident expert;
- a rhythm of recurring business planning with the company.

The formal list is in [Requirements](https://info.mobilerobot.com/partners/program/requirements/) (<https://info.mobilerobot.com/partners/program/requirements/>).

How we work together

The partnership values are collaboration, transparency, and a shared commitment to customer success; clear roles in a three-way relationship among company, partner, and end customer; non-exclusive freedom with performance-based rewards; structured planning and disciplined execution; and local presence with responsive support. Loyalty and commitment are rewarded with investment.

Where

Applications are handled by country. The network covered eight countries as of June 2026 and continues to expand — see [Country Availability](https://info.mobilerobot.com/partners/become-a-partner/country-availability/) (<https://info.mobilerobot.com/partners/become-a-partner/country-availability/>).

Next step

Follow the [Application Process](https://info.mobilerobot.com/partners/program/application-process/) (<https://info.mobilerobot.com/partners/program/application-process/>) or [contact the partner team](https://info.mobilerobot.com/partners/become-a-partner/contact-the-partner-team/) (<https://info.mobilerobot.com/partners/become-a-partner/contact-the-partner-team/>).

Country Availability

The J1600 is available worldwide, including in the United States, Canada, Australia, and China. This page explains how availability works in practice for customers and for prospective partners.

How worldwide availability works

The Mobile Robot Company [sells through an international network](https://info.mobilerobot.com/company/about/business-model/) of distributors, integrators, and service partners rather than directly. By June 2026 the company had distributor partnerships in eight countries, and the network is expanding. Customer inquiries are assigned through the [partner network](https://info.mobilerobot.com/partners/program/program-overview/) — as a rule of thumb, to the partner with the nearest experience center.

The [J1600](https://info.mobilerobot.com/products/j1600/overview/) is [CE marked](https://info.mobilerobot.com/safety-compliance/certificates/ce-declaration-of-conformity/) and complies with both European and US safety requirements, notably [EN ISO 3691-4](https://info.mobilerobot.com/safety-compliance/standards/iso-3691-4/) and [ANSI/ITSDF B56.5](https://info.mobilerobot.com/safety-compliance/standards/ansi-itsdf-b56-5/). The full list of directives and standards is in [Compliance Statements](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/).

What to confirm for your market

Several details are specific to each market and are handled through the company or a local partner rather than listed here:

- which countries the eight distributor partnerships cover, and who the local distributors and integrators are;
- country-specific prices, taxes, currencies, Incoterms, import duties, and delivery times;
- country-specific service coverage;
- certification details for individual markets such as Canada, Australia, or China.

Confirm availability, commercial terms, and local certification for your market with the company or a local partner before planning a deployment.

For customers

If you want to see or buy the robot, start at www.mobilerobot.com (<https://www.mobilerobot.com>) — list prices are public, and demo, trial, and purchase requests are [routed to a partner in your area](https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/) (<https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/>). See [Products](https://info.mobilerobot.com/category/products/) (<https://info.mobilerobot.com/category/products/>) for the product itself.

For prospective partners

Partnerships are established country by country, and the company invites qualified [integrators, distributors, and service partners](https://info.mobilerobot.com/partners/program/partner-types/) (<https://info.mobilerobot.com/partners/program/partner-types/>) to discuss [joining the network](https://info.mobilerobot.com/partners/program/why-partner-with-us/) (<https://info.mobilerobot.com/partners/program/why-partner-with-us/>) in their market. If your country is not yet covered, that is an opening rather than a barrier — see [Who We Are Looking For](https://info.mobilerobot.com/partners/become-a-partner/who-we-are-looking-for/) (<https://info.mobilerobot.com/partners/become-a-partner/who-we-are-looking-for/>) and the [Application Process](https://info.mobilerobot.com/partners/program/application-process/) (<https://info.mobilerobot.com/partners/program/application-process/>), or ask the [partner team](https://info.mobilerobot.com/partners/become-a-partner/contact-the-partner-team/) (<https://info.mobilerobot.com/partners/become-a-partner/contact-the-partner-team/>) about the status of your market.

Contact the Partner Team

Ready to discuss a partnership, or want to know whether your country is covered? Use the channels below.

General channels

Purpose	Contact
Partner inquiries and general email	hello@mobilerobot.com
Website	www.mobilerobot.com (https://www.mobilerobot.com) — see the "Partner with us" section
General telephone	+45 88 10 90 12

Headquarters (<https://info.mobilerobot.com/company/locations/headquarters/>): The Mobile Robot Company ApS, Kettevej 45, 2650 Hvidovre, Denmark.

EMEA

For Europe, the Middle East, and Africa, partner and integrator relationships are led by [Fernando Fandiño Oliver](https://info.mobilerobot.com/company/team/leadership/) (<https://info.mobilerobot.com/company/team/leadership/>), Senior Vice President EMEA:

- Email: fernando.fandino.oliver@mobilerobot.com
- Telephone: +34 649 999 802

What to include in a first message

Partnerships are established country by country, so a useful first message states:

- the country or countries you want to cover;

- your current core business — for example fork-truck sales and service, or automated material handling;
- which profile fits you best: distributor, integrator, or service partner (see [Partner Types](https://info.mobilerobot.com/partners/program/partner-types/) (<https://info.mobilerobot.com/partners/program/partner-types/>)).

Before you write

- [Who We Are Looking For](https://info.mobilerobot.com/partners/become-a-partner/who-we-are-looking-for/) (<https://info.mobilerobot.com/partners/become-a-partner/who-we-are-looking-for/>) — the partner profile.
- [Application Process](https://info.mobilerobot.com/partners/program/application-process/) (<https://info.mobilerobot.com/partners/program/application-process/>) — how the conversation runs.
- [Country Availability](https://info.mobilerobot.com/partners/become-a-partner/country-availability/) (<https://info.mobilerobot.com/partners/become-a-partner/country-availability/>) — how the network covers markets.

Marketing Resources

Logos, naming and messaging guidance, the public video catalog, and co-marketing resources for presenting The Mobile Robot Company and the J1600.



Logos and Brand Guidelines

[Download The Mobile Robot Company logo files and get the naming and messaging rules for presenting the company and the J1600 correctly in your own materials.](#)



Videos

[The Mobile Robot Company's public video catalog — live J1600 demonstrations, tutorials, capability explainers, and company videos on YouTube, with links to every video and the...](#)



Co-Marketing Program

[How The Mobile Robot Company funds and plans marketing with its partners — per-partner marketing funds that grow with every robot sold, co-branded campaigns and events, and a...](#)

Logos and Brand Guidelines

This page provides the company logo files and the basic rules for naming and messaging when you present The Mobile Robot Company or the J1600 in your own materials.

Logo files



File	Format	Use
mrc-logo.svg (https://info.mobilerobot.com/assets/files/mrc-logo-c6ad1064a846b0895783cd319a38bb7b.svg/)	SVG (vector)	Preferred for print, signage, and anything that scales
mrc-logo.png (https://info.mobilerobot.com/assets/files/mrc-logo-19625c4cbba7ca67fbcabef2927789db.png/)	PNG (raster)	Screen use where SVG is not supported

Naming

- **Legal name:** The Mobile Robot Company ApS.
- **Everyday name:** The Mobile Robot Company. The abbreviation **MRC** is also used.
- **Product name:** J1600 — always with the digits attached, as in "the J1600 self-driving pallet jack".
- **Product category:** self-driving pallet jack. The J1600 is a [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>) vehicle — both manual and autonomous — so avoid describing it as a purely autonomous robot.
- **Origin:** the J1600 is made in Denmark, and the company is [headquartered in Hvidovre, Denmark](https://info.mobilerobot.com/company/locations/headquarters/) (<https://info.mobilerobot.com/company/locations/headquarters/>).

Messaging

The company's positioning is that the J1600 sits between a conventional electric pallet jack and a fully automated system: manual flexibility is preserved, and the repetitive travel is automated. The underlying philosophy is [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/>) — robots assist people rather than displace them.

Recurring phrases used in company messaging:

- "The future drives itself" — the website tagline.
- "Human in the loop"
- "Automation should adapt to people"
- "Drop, go, repeat"
- "Teach and repeat"
- "Consumer-level easy"

- Automation that works "out of the box"

Headline product claims to use precisely:

- carries 1,600 kg and lifts to 1.6 m in manual mode; autonomous delivery is at floor level;
- saves up to 80% of operator time on repetitive transport (<https://info.mobilerobot.com/applications/results/productivity-improvements/>) — a claim about repetitive transport tasks, not every warehouse process;
- about 30 minutes of training for an existing pallet-jack operator;
- works out of the box, with Wi-Fi and systems integration optional;
- CE marked and compliant with EU and US safety standards (<https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/>);
- IFOY Industrial Truck of the Year 2026 winner (<https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/>).

For exact figures, always defer to the technical specifications (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Using the brand in co-branded marketing

The company provides partners with marketing materials and customer handouts for experience centers, demonstrations, and events. Co-branded promotions, campaigns, and events are supported through the Co-Marketing Program (<https://info.mobilerobot.com/partners/marketing-resources/co-marketing-program/>) and should align with the business plan agreed with the company.

Videos

The Mobile Robot Company publishes demonstrations, tutorials, and short explainers on its [YouTube channel](https://www.youtube.com/@the-mobile-robot-company) (<https://www.youtube.com/@the-mobile-robot-company>). As of 18 July 2026 the channel held [30 items](https://info.mobilerobot.com/newsroom/videos/full-video-library/) (<https://info.mobilerobot.com/newsroom/videos/full-video-library/>): 8 standard videos and 22 Shorts. Use them in customer conversations, at events, and on your own channels.

Demonstrations and events

Video	Published	What it shows
J1600 Live Demo at TEST CAMP 2026 (https://www.youtube.com/watch?v=0vffa1uGTQE)	1 Jul 2026	Full live demo: manual pickup, location saving, autonomous drop-and-return, 360-degree safety, plus a pricing and ROI discussion
Can Anyone Automate a Pallet Move in Minutes? (https://www.youtube.com/watch?v=PHBLT4XyvyI)	—	A first-time user drives the J1600, saves a location, creates a drop-and-return task, and watches it navigate around people
TEST CAMP INTRALOGISTICS (https://www.youtube.com/watch?v=HQyenBYeLTU)	16 Apr 2026	Panel remarks on automation total cost of ownership and one-day deployment
J1600 just hit a major milestone — officially certified as a Best in Logistics innovative solution! (https://www.youtube.com/watch?v=XG45XAKefYo)	22 Apr 2026	Receiving the Best in Intralogistics certificate at TEST CAMP
Inside Our Copenhagen Test Facility — Real-World Mobile Robot Testing in Action (https://www.youtube.com/watch?v=vrAAjAMF-8)	2 Apr 2026	The validation facility: uneven flooring, water-filled loads, multiple test setups
Showcasing the Future of Mobile Robotics at IFOY 2026 (https://www.youtube.com/watch?v=FBICNgCRqPw)	15 Jun 2026	Short event clip from IFOY 2026
This Is the Future of Warehouses (IFOY Event) (https://www.youtube.com/watch?v=EB7k1INqmgg)	—	Short event clip
J1600 in Action at IFOY (https://www.youtube.com/watch?v=HSIP5Z6HZvw)	—	Short event clip
Autonomous Mobile Robots (AMRs) in Action: Real Facility, Real Operators, Real Workflow (https://www.youtube.com/watch?v=VRUUxon5Q8)	—	Facility footage of the robot in a real workflow

Tutorials

Video	Published	What it shows
How to Add a Drop Location & Create Tasks on the J1600 Self-Driving Pallet Jack (https://www.youtube.com/watch?v=OGiOVtdKbk8)	—	Step by step: drive to the drop point, tap Save Location, name it, create a task, confirm automatic mode
How to Charge Your Robot (https://www.youtube.com/watch?v=I6GJ07Kbi4Y)	—	Manual plug-in charging and the automatic charger with opportunity charging
Learn About the J1600 Self-Driving Pallet Jack: Tutorials, Features & Benefits (https://www.youtube.com/watch?v=iNLb0HhCV5Y)	1 Jun 2026	Guide to the channel's short tutorials

Product capabilities

Video	Published	What it covers
What is Dual Mode (https://www.youtube.com/watch?v=MgmWCbdoge8)	25 Feb 2026	Manual pallet-jack operation plus one-button autonomous delivery
What extra capabilities does the Dual Mode Pallet Jack J1600 offer? (https://www.youtube.com/watch?v=HKGv7uzNxlw)	25 Feb 2026	Manual judgment for sensitive or unstable loads, autonomous long transport
How Our Mobile Robots Handle 1,600 kg Loads at 1.6 Meters (https://www.youtube.com/watch?v=7QXbmem2i2w)	1 Jun 2026	Payload and manual lift-height capability
Dual Mode J1600 AMR: Flexible Handling of Open Cages and Euro Pallets (https://www.youtube.com/watch?v=ovlpXTxkn8Y)	1 Jun 2026	Open cages, Euro pallets, and other open-base carriers
How many pallet locations can I have (https://www.youtube.com/watch?v=RZEsjOgnBvk)	24 Feb 2026	No software limit on saved locations
What's the most common task our robot performs? (https://www.youtube.com/watch?v=b0a0QWWNlws)	24 Feb 2026	Manual pick, autonomous delivery, drop, and return; the three post-drop options
Does the J1600 support VDA5050 (https://www.youtube.com/watch?v=wU4PwW7grKA)	24 Feb 2026	Full VDA 5050 support for multi-vendor fleets
Does J1600 it work on brownfield sites? (https://www.youtube.com/watch?v=Qe5kres-lgY)	24 Feb 2026	3D LiDAR navigation and obstacle avoidance in existing facilities

Company and vision

Video	Published	What it covers
The Vision Behind The Mobile Robot Company (https://www.youtube.com/watch?v=vtAdnMtn3j8)	27 Jun 2026	The single-shift SME focus and the 80%-automation proposition
When was The Mobile Robot Company founded (https://www.youtube.com/watch?v=ybe3uWrgn5E)	26 Feb 2026	Founding story and the founders' mission

Buying, trials, support, and partnership

Video	Published	What it covers
Inside the J1600 Dual Mode Journey: Customer Success, POC Validation & J1600 Flexibility (https://www.youtube.com/watch?v=jzGgsoReaZ8)	19 Jun 2026	Plant trials, proofs of concept, and load-carrier flexibility
From Trial to POC: Evaluating Mobile Robot Solutions (https://www.youtube.com/watch?v=FIO_kXSPRrQ)	1 Jun 2026	Testing in the Copenhagen demo area versus a proof of concept at your plant
How Mobile Robot Company Supports End Users and Customers (https://www.youtube.com/watch?v=_LZMgGYCjlg)	1 Jun 2026	How end users with projects or POCs get help from the sales and technical team
What is the price of the J1600 (https://www.youtube.com/watch?v=3uH9Mf8AKyE)	26 Feb 2026	The €65,000 robot, the €10,000 installation package, and charger options
What is my ROI besides labor cost savings (https://www.youtube.com/watch?v=e4b1-08U2hM)	25 Feb 2026	Safety, employee satisfaction, and inventory-control benefits
Is the J1600 available in my country (https://www.youtube.com/watch?v=QpR9zN44QNN)	24 Feb 2026	Worldwide availability and safety compliance
How do you get help if you have a technical issue with your robot? (https://www.youtube.com/watch?v=2Q5NFYGSmhA)	24 Feb 2026	The on-machine Help/Support QR code and the three service packages
How can you become a Mobile Robot Company partner? (https://www.youtube.com/watch?v=vzqeQyyf6tk)	24 Feb 2026	Invitation to integrators, distributors, and service partners — see Application Process (https://info.mobilerobot.com/partners/program/application-process/)

Podcast appearance

[Fernando Fandiño Oliver](https://info.mobilerobot.com/company/team/leadership/) (<https://info.mobilerobot.com/company/team/leadership/>), Senior Vice President EMEA, discussed global robotics scaling, EMEA market differences, and culturally tailored go-to-market strategy on the [Tech Talks](https://info.mobilerobot.com/newsroom/videos/interviews/) podcast "[The BotPod](https://info.mobilerobot.com/newsroom/videos/interviews/)" (<https://info.mobilerobot.com/newsroom/videos/interviews/>) ([watch on YouTube](https://youtu.be/2o2JAO_EAoo) (https://youtu.be/2o2JAO_EAoo); also available on Spotify and Apple Podcasts). The episode recap was published on 22 March 2026.

Social channels

Channel	Link
LinkedIn	linkedin.com/company/the-mobile-robot-company (https://www.linkedin.com/company/the-mobile-robot-company/)
Facebook	facebook.com/TheMobileRobotCompany (https://www.facebook.com/TheMobileRobotCompany)
Instagram	instagram.com/themobilerobotcompany (https://www.instagram.com/themobilerobotcompany/)
TikTok	tiktok.com/@themobilerobotcompany (https://www.tiktok.com/@themobilerobotcompany)
YouTube Shorts	youtube.com/@the-mobile-robot-company/shorts (https://www.youtube.com/@the-mobile-robot-company/shorts)

When embedding or sharing videos in co-branded material, follow [Logos and Brand Guidelines](https://info.mobilerobot.com/partners/marketing-resources/logos-and-brand-guidelines/) (<https://info.mobilerobot.com/partners/marketing-resources/logos-and-brand-guidelines/>) and align campaigns through the [Co-Marketing Program](https://info.mobilerobot.com/partners/marketing-resources/co-marketing-program/) (<https://info.mobilerobot.com/partners/marketing-resources/co-marketing-program/>).

Company

About The Mobile Robot Company, history, team, locations, and collaborations.



About Us

6 pages



History

4 pages



Team

3 pages



Locations

3 pages



Careers

2 pages



Collaborations

4 pages

About Us

Who The Mobile Robot Company is, what it believes about automation, how it does business, and the markets it serves.



Company Overview

The Mobile Robot Company ApS is a Danish robotics company founded in November 2024, headquartered in Hvidovre, Denmark, and maker of the J1600 dual-mode self-driving pallet...



Mission and Vision

The Mobile Robot Company's mission is to redefine how robots assist people in warehouses and factories — removing tedious, repetitive movement so employees can focus on work...



Our Approach to Automation

The seven design principles behind The Mobile Robot Company's products — operator authority, automating the walking, familiar tools, low training threshold, flexible change, progressive...



Human-in-the-Loop Philosophy

Why The Mobile Robot Company keeps a person in the loop — the division of work between operator and robot, and ten situations where human judgment still does the job better.



Business Model

How The Mobile Robot Company sells — public list prices, an international partner channel for demos, trials, deployment and service, and a low-risk four-step customer journey.



Markets We Serve

The customer segments and sectors The Mobile Robot Company targets — single-shift SMEs with one to five pallet-jack operators, plus larger sites with small, changeable material flows.

Company Overview

The Mobile Robot Company ApS (also abbreviated MRC) is a Danish robotics company that develops mobile robot solutions for internal material handling in warehouses, factories, production environments, and logistics operations. It was [founded in November 2024](https://info.mobilerobot.com/company/history/founding-story/) by [Emil Hauch Jensen and Odin Kudahl Skovsted](https://info.mobilerobot.com/company/team/leadership/) and is [headquartered in Hvidovre, Denmark](https://info.mobilerobot.com/company/locations/headquarters/).

Its flagship and first product is the [J1600](https://info.mobilerobot.com/products/j1600/overview/), a [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) self-driving pallet jack. The product targets the gap between flexible but repetitive manual pallet movement and expensive, complex full automation: the operator performs judgment-heavy pickup, [exception handling](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/), and task initiation, while the robot performs repetitive travel and floor-level drop-off.

Company facts

Field	Information
Legal name	The Mobile Robot Company ApS
Founded	November 2024
Founders	Emil Hauch Jensen and Odin Kudahl Skovsted
Headquarters	Kettevej 45, 2650 Hvidovre, Denmark
Product	J1600 self-driving pallet jack
Website	mobilerobot.com (https://www.mobilerobot.com)
General email	hello@mobilerobot.com
General telephone	+45 88 10 90 12
Route to market	International distributor, integrator, and service-partner network
Distributor footprint, June 2026	Eight countries
Main award	IFOY Industrial Truck of the Year 2026

What the company believes

Robots should assist rather than displace operators. Tedious transport work is automated so people can focus on decisions and exceptions that require human context. The product principles are:

- practical, accessible, and affordable automation;
- [rapid deployment](https://info.mobilerobot.com/applications/results/faster-deployment/) (<https://info.mobilerobot.com/applications/results/faster-deployment/>), and value from day one;
- operator-centric and no-code control;
- human takeover whenever conditions require judgment;
- [optional, rather than mandatory, systems integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>);

- [scalable software and fleet integration](https://info.mobilerobot.com/documentation/technical-integration/integration-overview/) (<https://info.mobilerobot.com/documentation/technical-integration/integration-overview/>) when the application grows.

See [Mission and Vision](https://info.mobilerobot.com/company/about/mission-and-vision/) (<https://info.mobilerobot.com/company/about/mission-and-vision/>) and the [Human-in-the-Loop Philosophy](https://info.mobilerobot.com/company/about/human-in-the-loop-philosophy/) (<https://info.mobilerobot.com/company/about/human-in-the-loop-philosophy/>) for the thinking behind these principles.

Product and market focus

The company focuses on horizontal, indoor pallet flows in [goods receiving](https://info.mobilerobot.com/applications/industries/goods-receiving/) (<https://info.mobilerobot.com/applications/industries/goods-receiving/>), storage, production, [staging](https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/) (<https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/>), [cross-docking](https://info.mobilerobot.com/applications/use-cases/cross-docking/) (<https://info.mobilerobot.com/applications/use-cases/cross-docking/>), and shipping. Priority segments include small and medium businesses using one to five pallet-jack operators, plus larger sites with [local work cells](https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/) (<https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/>) too small or changeable for a conventional fleet project. See [Markets We Serve](https://info.mobilerobot.com/company/about/markets-we-serve/) (<https://info.mobilerobot.com/company/about/markets-we-serve/>).

Commercial model

[List prices are public](https://info.mobilerobot.com/products/j1600/pricing-and-roi/) (<https://info.mobilerobot.com/products/j1600/pricing-and-roi/>), but customer inquiries are routed through partners. Partners deliver local demonstrations, trials, deployment, service, and customer relationships; the company supplies robots, parts, software, technical support, training, and leads. See [Business Model](https://info.mobilerobot.com/company/about/business-model/) (<https://info.mobilerobot.com/company/about/business-model/>) and the [Partners section](https://info.mobilerobot.com/category/partners/) (<https://info.mobilerobot.com/category/partners/>).

Recognition

The J1600 won the [IFOY AWARD 2026](https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/) (<https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/>) in the Industrial Truck of the Year category, announced on 26 June 2026 — a challenger victory for a company founded in November 2024 against established industrial-truck manufacturers. The company joined the [NVIDIA Inception](https://info.mobilerobot.com/company/collaborations/nvidia-inception/) (<https://info.mobilerobot.com/company/collaborations/nvidia-inception/>) program in November 2025 and receives support from [Innovation Fund Denmark](https://info.mobilerobot.com/company/collaborations/innovation-fund-denmark/) (<https://info.mobilerobot.com/company/collaborations/innovation-fund-denmark/>). See [Company Milestones](https://info.mobilerobot.com/) (<https://info.mobilerobot.com/>).

[company/history/company-milestones/](https://info.mobilerobot.com/company/history/company-milestones/)) and [Collaborations \(https://info.mobilerobot.com/company/collaborations/technology-collaborations/\)](https://info.mobilerobot.com/company/collaborations/technology-collaborations/).

Mission and Vision

The Mobile Robot Company's mission is to redefine how robots assist people in warehouses and factories. The desired outcome is not a people-free process: robots remove tedious, repetitive movement so employees can focus on work requiring judgment, adaptability, and uniquely human insight.

Core positioning

The [J1600](https://info.mobilerobot.com/products/j1600/overview/) is positioned in the space between a conventional electric pallet jack and a fully automated [AMR/AGV](https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/) system:

- manual solutions preserve flexibility but require [operator walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) and travel time;
- full automation can eliminate labor from a task but often needs expert configuration, integration, infrastructure, and stable processes;
- [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) operation preserves manual control and automates the travel portion, targeting up to 80% of the [productivity and labor benefit](https://info.mobilerobot.com/applications/results/productivity-improvements/) at a fraction of full-automation cost and complexity.

How the company talks about itself

Recurring phrases in [the company's messaging](https://info.mobilerobot.com/newsroom/media-kit/brand-guidelines/):

- "human in the loop"
- "automation should adapt to people"
- "the future drives itself"
- "drop, go, repeat"
- "teach and repeat"
- "consumer-level easy"
- automation that works "out of the box"

The human-value argument

Warehouses are messy, dynamic, and unpredictable. The company's ten-example argument identifies damaged pallets and goods, unstable loads, plastic-wrap snags, misplaced pallets, steep dock plates, crowded floors, urgent reprioritization, and route changes as situations where human context remains valuable. The full reasoning is covered in the [Human-in-the-Loop Philosophy](https://info.mobilerobot.com/company/about/human-in-the-loop-philosophy/) (<https://info.mobilerobot.com/company/about/human-in-the-loop-philosophy/>) and 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/>).

Where the vision comes from

The founders had collectively completed projects for hundreds of customers and deployed more than 10,000 robots before starting the company. They concluded that robot projects were too hard, too slow, and too complex, and formed the company to make mobile robots more operator-centric, easier to use, and more flexible. See the [Founding Story](https://info.mobilerobot.com/company/history/founding-story/) (<https://info.mobilerobot.com/company/history/founding-story/>).

Our Approach to Automation

The Mobile Robot Company builds automation that adapts to people rather than the other way around. This page explains the design principles that shape the [J1600](https://info.mobilerobot.com/products/j1600/overview/) and the company's view of where automation delivers the most value.

A new tier between manual and fully automated

[Most pallet transport today is manual](https://info.mobilerobot.com/documentation/concepts/pallet-automation-fundamentals/): flexible, but full of [repetitive walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) and travel time. Full automation removes the labor but often requires expert configuration, [systems integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/), infrastructure, and stable processes. The company's [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) approach occupies the space between the two — manual control is preserved, the travel portion is automated, and the target is up to 80% of the [productivity benefit](https://info.mobilerobot.com/applications/results/productivity-improvements/) at a fraction of the cost and complexity of full automation.

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

Design principles

1. **Operator authority.** [A person initiates work and decides when the machine may enter autonomous mode](https://info.mobilerobot.com/safety-compliance/safe-deployment/operator-responsibilities/).

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 should 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 nor a systems project.
5. **Flexible change.** Operators add locations by driving and saving them rather than calling an automation expert.
6. **Progressive scale.** [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>), [VDA 5050](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/) (<https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/>), APIs, automatic charging, and [fleet management](https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/>) remain available when needed.
7. **Economics for smaller operations.** The company explicitly targets [single-shift SMEs 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/>).

Why 80% and not 100%

The final part of pallet work — checking a pallet, placing forks, judging an unstable load, choosing an improvised drop point, reprioritizing a production need — is disproportionately difficult to automate. Removing the operator entirely can require warehouse-management-system and fleet integration, infrastructure, expert configuration, and tightly controlled processes. By leaving those decisions to a person and automating the long travel, dual mode delivers most of the gain with greater flexibility and a lower entry cost. The full argument is in the [Human-in-the-Loop Philosophy](https://info.mobilerobot.com/company/about/human-in-the-loop-philosophy/) (<https://info.mobilerobot.com/company/about/human-in-the-loop-philosophy/>).

Lessons from highly automated facilities

[A company visit to a major e-commerce cross-docking facility](https://info.mobilerobot.com/newsroom/stories/behind-the-scenes/) (<https://info.mobilerobot.com/newsroom/stories/behind-the-scenes/>) reinforced this approach. Even at a site with major robotics adoption, not every process was automated, some robotic systems were being phased out in favor of reliable conveyors and sorters, minor mechanical downtime of under 10 minutes could occur several times per day, and layout, flow, buffer, and SKU-mix changes could occur several times per week. The conclusion: [flexibility and robustness](https://info.mobilerobot.com/applications/results/operational-flexibility) (<https://info.mobilerobot.com/applications/results/operational-flexibility>).

y/l are business necessities even in highly automated operations — autonomy for repetitive travel, with immediate manual control when conditions change.

Human-in-the-Loop Philosophy

Human-in-the-loop automation — also called human-robot collaboration or operator-centric automation — is the operating philosophy behind The Mobile Robot Company and the [J1600](https://info.mobilerobot.com/products/j1600/overview/). A person retains task authority, performs contextual handling, and can take over instantly; the robot performs repetitive, predictable travel.

For the concept explained from a product perspective, see [Human-in-the-loop automation](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/).

Division of work

Human operator	J1600
Judge load stability, pallet condition, congestion, urgency, and exceptions	Build and update a 3D map and navigate to saved points
Pick pallets and perform difficult or manual height handling	Carry up to 1,600 kg along repetitive routes
Select destination and what happens after delivery	Avoid obstacles and apply speed-dependent safety fields
Confirm entry into autonomous mode	Drop at floor level, return, park, continue, or wait
Override or resume manual control	Repeat stored tasks consistently

Why the operator stays in the loop

The final part of pallet work can be disproportionately difficult to automate: checking a pallet, placing forks, judging an unstable load, interfacing with a conveyor, choosing an improvised drop point, or reprioritizing a production need. Removing the operator can require WMS and fleet integration, infrastructure, expert configuration, and tightly controlled processes.

By retaining the operator, the J1600 avoids treating human judgment as a system failure. The result is 80% of automation's [productivity gain](https://info.mobilerobot.com/applications/results/productivity-improvements/) (<https://info.mobilerobot.com/applications/results/productivity-improvements/>), while retaining [manual flexibility](https://info.mobilerobot.com/applications/results/operational-flexibility/) (<https://info.mobilerobot.com/applications/results/operational-flexibility/>) and lowering cost and implementation risk.

Ten jobs humans still do better

Warehouses are messy, dynamic, and unpredictable. Ten common situations favor keeping a human in the loop:

1. **Spot damaged pallets** — notice a broken bottom board or protruding nail before a safety hazard or jam develops.
2. **Judge load stability** — recognize a [top-heavy, leaning, or poorly stacked load](https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/) (<https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/>), before lifting it.
3. **Prevent plastic-wrap snags** — see and tuck away a loose shrink-wrap tail before it catches a rack or doorframe.
4. **Locate misplaced pallets** — look around for a pallet that is not exactly at the recorded position rather than stop on a system error.
5. **Catch damaged goods** — identify leaks or crushed corners before delivery to a customer or production line.
6. **Handle steep dock plates** — adapt to bumps, slopes, and misalignment when entering a truck or trailer. Autonomous-mode gradeability is 0°, so slopes remain a manual task.
7. **Navigate crowded floors** (<https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/>) — improvise a safe route through an overflowing or cluttered receiving area.
8. **Respond to urgency** — reprioritize a delivery immediately when a production line is starving.
9. **Teach routes** (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>) — drive to a new point and tap **Save location** instead of calling IT to reprogram a map.
10. **Avoid automation overhead** — pursue the 80% efficiency gain without the full cost, rigid infrastructure, or complex integration of full automation.

These are advocacy examples, not comparative test results. They explain the design logic behind [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>) and the

company's [approach to automation](https://info.mobilerobot.com/company/about/our-approach-to-automation/) (<https://info.mobilerobot.com/company/about/our-approach-to-automation/>).

Safety role

Human control is not the vehicle's only safety mechanism. The J1600 also uses independent controllers, certified components, LiDAR scanners, emergency stops, and a 360-degree protective field. Human takeover complements rather than replaces the certified safety architecture — see [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/>).

Business Model

The Mobile Robot Company sells practical mobile-robot automation through an international partner channel. Public list prices reduce customer friction, while end-user inquiries are routed to [distributors, integrators, or service partners](https://info.mobilerobot.com/partners/program/partner-types/) (<https://info.mobilerobot.com/partners/program/partner-types/>).

Route to market

The company does not sell robots directly to end users. Partners provide local demonstrations, trials, sales, installation, service, and customer ownership. The company provides robots, software, parts, training, technical support, marketing materials, leads, and joint business planning.

The service model lets partners retain the revenue from local human services, while the company supplies parts, software, and paid engineering support to the partner. By June 2026, distributor partnerships existed in eight countries and the network was expanding — see [Growth and International Expansion](https://info.mobilerobot.com/company/history/growth-and-international-expansion/) (<https://info.mobilerobot.com/company/history/growth-and-international-expansion/>).

[Qualified integrators, distributors, and service partners](https://info.mobilerobot.com/partners/become-a-partner/who-we-are-looking-for/) (<https://info.mobilerobot.com/partners/become-a-partner/who-we-are-looking-for/>) [can apply by country](https://info.mobilerobot.com/partners/program/application-process/) (<https://info.mobilerobot.com/partners/program/application-process/>). The [Partners section](https://info.mobilerobot.com/category/partners/) (<https://info.mobilerobot.com/category/partners/>) describes the partner program.

The customer journey

The sales model removes [adoption barriers](https://info.mobilerobot.com/documentation/concepts/pallet-automation-fundamentals/) (<https://info.mobilerobot.com/documentation/concepts/pallet-automation-fundamentals/>) through a low-risk, four-step journey:

1. **Demo** (<https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/>) — 30–60 minutes of hands-on use at a partner experience center. A first-time visitor can typically send the robot on an autonomous task within about 15 minutes.
2. **Trial** — 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/>) with free return at any time, no questions asked.

3. **Purchase** — full purchase of the robot and [selected options](https://info.mobilerobot.com/products/chargers-and-accessories/available-options/) (<https://info.mobilerobot.com/products/chargers-and-accessories/available-options/>).
4. **After-sales service** — an [ongoing service and maintenance agreement](https://info.mobilerobot.com/support/faq/service-and-warranty/) (<https://info.mobilerobot.com/support/faq/service-and-warranty/>).

Demo and trial can be skipped, for example by repeat customers, and an after-sales agreement is optional.

What the company sells

Revenue-bearing offers include:

- the [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>) self-driving pallet jack and manual or automatic chargers;
- [Standard and Advanced software](https://info.mobilerobot.com/products/software/software-comparison/) (<https://info.mobilerobot.com/products/software/software-comparison/>), and the [Fleet Manager](https://info.mobilerobot.com/products/software/fleet-manager/) (<https://info.mobilerobot.com/products/software/fleet-manager/>);
- two-week paid trials;
- [installation and commissioning](https://info.mobilerobot.com/products/buying-and-deployment/installation-and-commissioning/) (<https://info.mobilerobot.com/products/buying-and-deployment/installation-and-commissioning/>);
- annual Basic Care and Full Care support plans;
- spare parts and software upgrades;
- paid on-site support;
- a starter package for new partners.

The J1600 [lists from €65,000](https://info.mobilerobot.com/products/j1600/pricing-and-roi/) (<https://info.mobilerobot.com/products/j1600/pricing-and-roi/>), and a two-week trial costs €4,000 including setup and support. List prices are published openly; the €65,000 base price contrasts with full-automation projects that can reach approximately €1 million.

Why public list prices

Public pricing removes a common adoption barrier. Customers can request or book demos, trials, and [purchases](https://info.mobilerobot.com/products/buying-and-deployment/request-a-quote/) (<https://info.mobilerobot.com/products/buying-and-deployment/request-a-quote/>) online, and inquiries are then channeled to the partner best placed to serve them — normally the partner with the nearest experience center. Partners are expected to respond rapidly and maintain a seamless experience.

Designed for single-shift economics

The economics are intended to work for a single-shift SME operating eight hours per day, five days per week — an operation that cannot justify a large automation project but values immediate, measurable productivity gains. See [Markets We Serve](https://info.mobilerobot.com/company/about/markets-we-serve/) (<https://info.mobilerobot.com/company/about/markets-we-serve/>).

Markets We Serve

The Mobile Robot Company focuses on horizontal, indoor pallet flows in [goods receiving](https://info.mobilerobot.com/applications/industries/goods-receiving/), [storage](https://info.mobilerobot.com/applications/industries/goods-receiving/), production, [staging](https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/), [cross-docking](https://info.mobilerobot.com/applications/use-cases/cross-docking/), and shipping. This page describes the market it addresses and the customers it serves.

A large, lightly automated market

Pallet transport is [one of the biggest and least automated activities](https://info.mobilerobot.com/documentation/concepts/pallet-automation-fundamentals/) in intralogistics:

- more than one million pallet jacks are sold worldwide each year;
- more than 300,000 are sold in Europe annually;
- more than six million people use pallet jacks in daily work;
- only about 1% of pallet handling is automated.

The target is the remaining, mostly manual segment — especially SMEs with one to five operators, single-shift economics, and insufficient budget, time, or resources for a full automation project.

Primary customer segments

- [small and medium manufacturers](https://info.mobilerobot.com/applications/industries/manufacturing/);
- [warehouse operators](https://info.mobilerobot.com/applications/industries/warehousing/) with approximately one to five pallet-jack operators;
- single-shift facilities that cannot justify a large automation project;
- small [third-party logistics](https://info.mobilerobot.com/applications/industries/third-party-logistics/) providers;
- [grocery and FMCG distribution](https://info.mobilerobot.com/applications/industries/grocery-and-fmcg/);

- [e-commerce and fulfillment operations](https://info.mobilerobot.com/applications/industries/e-commerce-and-fulfillment/) (<https://info.mobilerobot.com/applications/industries/e-commerce-and-fulfillment/>);
- larger sites with many [local work cells](https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/) (<https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/>) or changeable flows;
- [brownfield sites](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>), seeking incremental automation.

Application sectors

Manufacturing and [internal production logistics](https://info.mobilerobot.com/applications/industries/internal-production-logistics/) (<https://info.mobilerobot.com/applications/industries/internal-production-logistics/>); warehousing and goods receipt; third-party logistics; grocery and FMCG distribution; e-commerce fulfillment; and local material-flow cells inside larger sites. Concrete deployment patterns are described in the [Applications section](https://info.mobilerobot.com/category/applications/) (<https://info.mobilerobot.com/category/applications/>).

Customer problems the company addresses

- [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](https://info.mobilerobot.com/applications/use-cases/temporary-storage/) (<https://info.mobilerobot.com/applications/use-cases/temporary-storage/>), and changing SKU mix;
- desire for fast, measurable ROI without infrastructure overhaul.

Geographic reach

The [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>) 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. Availability and commercial terms in a specific country are confirmed through the company or a local partner — see [Growth](#)

[and International Expansion](https://info.mobilerobot.com/company/history/growth-and-international-expansion/) (<https://info.mobilerobot.com/company/history/growth-and-international-expansion/>).

Why this market fits the product

The [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>) J1600 is a low-threshold bridge between manual pallet trucks and classic [AGVs and AMRs](https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/) (<https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/>). Its advantage is not maximum autonomy; it is the combination of familiar manual control, autonomous travel, rapid setup, and a [lower integration burden](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>) — a fit for operations that need productivity gains without redesigning their workflows. See [Our Approach to Automation](https://info.mobilerobot.com/company/about/our-approach-to-automation/) (<https://info.mobilerobot.com/company/about/our-approach-to-automation/>).

History

The founding of The Mobile Robot Company and the milestones from November 2024 to the IFOY Award 2026 and beyond.



Founding Story

How Emil Hauch Jensen and Odin Kudahl Skovsted founded The Mobile Robot Company in November 2024 after concluding that robot projects were too hard, too slow, and too complex.



Company Milestones

Chronological milestones of The Mobile Robot Company from its founding in November 2024 through the IFOY Award 2026 win and international expansion.



Product Launch Timeline

The four distinct J1600 launch milestones — market launch on 20 October 2025, pre-orders on 2 December 2025, first-product launch in January 2026, and shipping in Q2 2026.



Growth and International Expansion

How The Mobile Robot Company grew from a November 2024 founding to distributor partnerships in eight countries and worldwide J1600 availability by mid-2026.

Founding Story

[The Mobile Robot Company](https://info.mobilerobot.com/company/about/company-overview/) (<https://info.mobilerobot.com/company/about/company-overview/>) was founded in Denmark in November 2024 by [Emil Hauch Jensen and Odin Kudahl Skovsted](https://info.mobilerobot.com/company/team/leadership/) (<https://info.mobilerobot.com/company/team/leadership/>).

The experience behind the company

Before founding the company, the two founders had built international careers at mobile-robotics and automation companies. Between them they had completed projects for hundreds of customers and deployed more than 10,000 robots worldwide.

That experience led to a clear conclusion: robot projects were too hard, too slow, and too complex. Automation that should have freed people from repetitive work instead demanded expert configuration, systems integration, and rigid processes.

The founding mission

The founders formed the company to make mobile robots more operator-centric, easier to use, and more flexible. The philosophy is that robots should assist rather than displace operators — automating tedious transport so people can focus on decisions and exceptions that require human context. This became the company's [human-in-the-loop philosophy](https://info.mobilerobot.com/company/about/human-in-the-loop-philosophy/) (<https://info.mobilerobot.com/company/about/human-in-the-loop-philosophy/>) and shaped the design of the [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>), the company's first product.

A fast first chapter

The company's first chapter moved quickly:

- founded in November 2024;
- [first product launched by January 2026](https://info.mobilerobot.com/company/history/product-launch-timeline/) (<https://info.mobilerobot.com/company/history/product-launch-timeline/>);
- a major international award — [IFOY Industrial Truck of the Year 2026](https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/) (<https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/>) — won by June 2026;

- [distributor partners active in eight countries \(https://info.mobilerobot.com/company/history/growth-and-international-expansion/\)](https://info.mobilerobot.com/company/history/growth-and-international-expansion/) by June 2026.

The full timeline is in [Company Milestones \(https://info.mobilerobot.com/company/history/company-milestones/\)](https://info.mobilerobot.com/company/history/company-milestones/).

Company Milestones

This page lists the company's milestones in chronological order, from founding through its first product launch, international recognition, and channel expansion.

Chronology

Date	Milestone
November 2024	Emil Hauch Jensen and Odin Kudahl Skovsted found The Mobile Robot Company in Denmark.
20 October 2025	J1600 market launch.
November 2025	The company joins the NVIDIA Inception (https://info.mobilerobot.com/company/collaborations/nvidia-inception/), program.
November 2025	The company enters The Robot Report's 100 Robotics Startups to Watch — Startup Radar 2025.
2 December 2025	J1600 pre-orders open.
12 January 2026	Fernando Fandiño Oliver becomes Senior Vice President EMEA.
January 2026	The J1600 launches as the company's first product.
29 January 2026	The company launches its 2026 technical webinar series and announces the J1600 as an IFOY finalist.
Q2 2026	Scheduled J1600 shipping window.
6 March 2026	The company announces support from Innovation Fund Denmark (https://info.mobilerobot.com/company/collaborations/innovation-fund-denmark/).
22 March 2026	Senior Vice President EMEA Fernando Fandiño Oliver appears on a robotics-industry podcast.
15–17 April 2026	The company participates in TEST CAMP INTRALOGISTICS 2026 in Dortmund.
16 April 2026	The J1600 receives the Best in Intralogistics Certificate after passing the three-stage IFOY Audit.
25 June 2026	IFOY winner ceremony in Stuttgart.

Date	Milestone
26 June 2026	The J1600 wins IFOY Industrial Truck of the Year 2026. The company has distributor partners in eight countries.
27–29 June 2026	The J1600 is demonstrated at the United Symbol Open House 2026 in Sassuolo, Italy, with support from ALCA Technologies.
8 July 2026	The company highlights its collaboration with ALCA Technologies (https://info.mobilerobot.com/company/collaborations/technology-collaborations/).

i LAUNCH DATES ARE DISTINCT EVENTS

"Market launch" (20 October 2025), pre-orders (2 December 2025), first-product launch (January 2026), and shipping (Q2 2026) are different milestones. See the [Product Launch Timeline](https://info.mobilerobot.com/company/history/product-launch-timeline/) (<https://info.mobilerobot.com/company/history/product-launch-timeline/>).

The award milestone

The [IFOY AWARD 2026 win](https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/) (<https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/>) in the Industrial Truck of the Year category, announced on 26 June 2026, was the first Danish receipt of this international logistics honor and a challenger victory against established industrial-truck manufacturers, for a company founded only in November 2024. More detail is in the [Newsroom](https://info.mobilerobot.com/category/newsroom/) (<https://info.mobilerobot.com/category/newsroom/>).

Related pages

- [Founding Story](https://info.mobilerobot.com/company/history/founding-story/) (<https://info.mobilerobot.com/company/history/founding-story/>)
- [Product Launch Timeline](https://info.mobilerobot.com/company/history/product-launch-timeline/) (<https://info.mobilerobot.com/company/history/product-launch-timeline/>)
- [Growth and International Expansion](https://info.mobilerobot.com/company/history/growth-and-international-expansion/) (<https://info.mobilerobot.com/company/history/growth-and-international-expansion/>)

Product Launch Timeline

The [J1600](https://info.mobilerobot.com/products/j1600/overview/) reached the market through four distinct milestones. They are often confused, so this page states each one precisely.

The four launch milestones

Date	Milestone	What it means
20 October 2025	Market launch	The recorded J1600 market-launch date.
2 December 2025	Pre-orders open	Customers can place pre-orders for the J1600.
January 2026	First-product launch	The J1600 launches as the company's first product.
Q2 2026	Shipping window	The scheduled window for J1600 shipments.

KEEP THE DATES DISTINCT

"Market launch," "first product launch," "pre-orders," and "ships" refer to different milestones. The October 2025, December 2025, January 2026, and Q2 2026 dates should not be collapsed into a single event.

Launch-period context

- The J1600 was announced as an IFOY finalist on 29 January 2026, the same day the company launched its [2026 technical webinar series](https://info.mobilerobot.com/newsroom/events/technical-webinars/) with a deep dive on the J1600.
- The specifications published in January 2026 are preliminary and subject to change — see the [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/).
- At launch, the J1600 was offered [from €65,000](https://info.mobilerobot.com/products/j1600/pricing-and-roi/), with a two-week paid trial at €4,000 including setup and

support.

After launch

Within six months of the first-product launch, the J1600 had passed the three-stage IFOY Audit, 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, and won [IFOY Industrial Truck of the Year 2026](https://info.mobilerobot.com/newsroom/awards/ifo-award-2026/) (https://info.mobilerobot.com/newsroom/awards/ifo-award-2026/) on 26 June 2026. See [Company Milestones](https://info.mobilerobot.com/company/history/company-milestones/) (https://info.mobilerobot.com/company/history/company-milestones/) and [Growth and International Expansion](https://info.mobilerobot.com/company/history/growth-and-international-expansion/) (https://info.mobilerobot.com/company/history/growth-and-international-expansion/).

Growth and International Expansion

The Mobile Robot Company expanded internationally through a partner channel rather than direct sales. This page tracks that growth from [founding](https://info.mobilerobot.com/company/history/founding-story/) to mid-2026.

From founding to eight countries

The company was founded in Denmark in November 2024. By June 2026 — roughly nineteen months later — it had distributor partnerships in eight countries, with the network still expanding. The footprint stood at eight countries at the time of the [IFOY Industrial Truck of the Year 2026 win](https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/) on 26 June 2026.

Worldwide availability

The [J1600](https://info.mobilerobot.com/products/j1600/overview/) is available worldwide, including in the United States, Canada, Australia, and China. Customer inquiries are assigned through the partner network rather than fulfilled directly by the company; [qualified integrators, distributors, and service partners](https://info.mobilerobot.com/partners/become-a-partner/who-we-are-looking-for/) can [apply by country](https://info.mobilerobot.com/partners/program/application-process/). See the [Partners section](https://info.mobilerobot.com/category/partners/).

[Country-specific details](https://info.mobilerobot.com/partners/become-a-partner/country-availability/) — named local partners, prices, taxes, currencies, delivery terms, and service coverage — are confirmed with the company or a local partner.

EMEA leadership

On 12 January 2026 the company appointed Fernando Fandiño Oliver as Senior Vice President EMEA. His remit covers regional business development, market expansion, customer and partner relationships, strategic initiatives, and execution of the company's long-term growth strategy across Europe, the Middle East, and Africa. See [Leadership](https://info.mobilerobot.com/company/team/leadership/).

European presence in 2026

- **Dortmund, Germany, 15–17 April 2026** — participation in [TEST CAMP INTRALOGISTICS 2026](https://info.mobilerobot.com/newsroom/events/test-camp/) (<https://info.mobilerobot.com/newsroom/events/test-camp/>) and the [33rd German Material Flow Congress](https://info.mobilerobot.com/newsroom/events/past-events/) (<https://info.mobilerobot.com/newsroom/events/past-events/>); the J1600 made its first public appearance during the IFOY Audit 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.
- **Stuttgart, Germany, 25–26 June 2026** — IFOY winner ceremony and the announcement of the Industrial Truck of the Year 2026 win.
- **Sassuolo, Italy, 27–29 June 2026** — J1600 demonstrations at the United Symbol Open House, supported by [ALCA Technologies](https://info.mobilerobot.com/company/collaborations/technology-collaborations/) (<https://info.mobilerobot.com/company/collaborations/technology-collaborations/>).

Recognition supporting growth

International recognition accompanied the commercial expansion: entry into [The Robot Report's 100 Robotics Startups to Watch](https://info.mobilerobot.com/newsroom/awards/startup-recognition/) (<https://info.mobilerobot.com/newsroom/awards/startup-recognition/>) (November 2025), membership of [NVIDIA Inception](https://info.mobilerobot.com/company/collaborations/nvidia-inception/) (<https://info.mobilerobot.com/company/collaborations/nvidia-inception/>) (November 2025), support from [Innovation Fund Denmark](https://info.mobilerobot.com/company/collaborations/innovation-fund-denmark/) (<https://info.mobilerobot.com/company/collaborations/innovation-fund-denmark/>) (announced 6 March 2026), and the IFOY Award 2026. The full sequence is in [Company Milestones](https://info.mobilerobot.com/company/history/company-milestones/) (<https://info.mobilerobot.com/company/history/company-milestones/>).

Team

The people behind The Mobile Robot Company: leadership profiles, the wider team, and who to contact.



Leadership

Profiles of The Mobile Robot Company's leadership — co-founder and CEO Emil Hauch Jensen, co-founder and CTO Odin Kudahl Skovsted, and Senior Vice President EMEA Fernando Fandiñ...



Team Members

The people working at The Mobile Robot Company, from the co-founders and EMEA leadership to the wider team.



Contact People

Who to contact at The Mobile Robot Company — general inquiries, CEO and media contact Emil Hauch Jensen, and EMEA contact Fernando Fandiño Oliver.

Leadership

The Mobile Robot Company is led by its two co-founders and a senior regional executive. Contact details for media and regional inquiries are on the [Contact People](https://info.mobilerobot.com/company/team/contact-people/) (<https://info.mobilerobot.com/company/team/contact-people/>), page.

Emil Hauch Jensen — Co-founder and CEO

Emil Hauch Jensen (also "Emil Jensen") is co-founder and CEO of The Mobile Robot Company. He co-founded the business with Odin Kudahl Skovsted in November 2024 and is its principal spokesperson.

Background

His earlier experience covers international leadership roles at mobile-robotics and automation companies. As a general manager of overseas business, he secured multimillion-euro contracts, launched new robotics products, and built an international sales team from the ground up. He also contributed to revenue growth and expanded sales operations in China at an international mobile-robotics company.

Role

Emil's public topics include [product demonstrations](https://info.mobilerobot.com/newsroom/videos/product-demonstrations/) (<https://info.mobilerobot.com/newsroom/videos/product-demonstrations/>), pricing and ROI, founding history, worldwide availability, VDA 5050, task and location setup, and the company's [human-in-the-loop philosophy](https://info.mobilerobot.com/company/about/human-in-the-loop-philosophy/) (<https://info.mobilerobot.com/company/about/human-in-the-loop-philosophy/>). The company's route-to-market, IFOY, NVIDIA Inception, funding, and flexible-automation narratives are attributed to him.

Odin Kudahl Skovsted — Co-founder and CTO

Odin Kudahl Skovsted (sometimes shortened to Odin Skovsted) is co-founder and CTO of The Mobile Robot Company.

Background

He is a senior management executive and robotics expert with more than two decades of experience in technological innovation and business growth. As a vice president of customer application support at an international mobile-robotics company, he helped scale the business from a small startup to a global enterprise.

Role

Odin is responsible for technical leadership. In public material he describes the [Copenhagen test facility](https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/) (https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/)'s real-world validation conditions, the J1600's 1.6 m manual pick height and 1,600 kg payload, manual and automatic charging, and rapid deployment, measurable productivity, efficiency, and resilience.

Fernando Fandiño Oliver — Senior Vice President EMEA

Fernando Fandiño Oliver (also "Fernando Fandino" or "Fernando Fandiño") joined The Mobile Robot Company as Senior Vice President EMEA, announced on 12 January 2026. His remit covers regional business development, market expansion, customer and partner relationships, strategic initiatives, and execution of the company's long-term growth strategy across Europe, the Middle East, and Africa.

Background

His international career in mobile robotics and intralogistics includes leading regional business and market-expansion strategies in EMEA, developing and managing partner and integrator networks, executing mobile-robotics projects in complex industrial environments, aligning commercial, technical, and operational teams, and contributing to market growth, partner ecosystems, and large-scale AMR adoption across multiple industries.

Role

Fernando appears in [public material about trials and proofs of concept](https://info.mobilerobot.com/newsroom/videos/customer-and-partner-videos/) (https://info.mobilerobot.com/newsroom/videos/customer-and-partner-videos/), customer support, pallet and load-carrier flexibility, service packages, partnership applications, common transport tasks, and the value of manual judgment for sensitive or unstable loads. He has also

discussed global robotics scaling on [a robotics-industry_podcast](https://info.mobilerobot.com/newsroom/videos/interviews/) (<https://info.mobilerobot.com/newsroom/videos/interviews/>).

Shared founding experience

Before founding the company, Emil and Odin had collectively completed projects for hundreds of customers and deployed more than 10,000 robots. That experience is the basis of the company's [founding mission](https://info.mobilerobot.com/company/about/mission-and-vision/) (<https://info.mobilerobot.com/company/about/mission-and-vision/>), — see the [Founding Story](https://info.mobilerobot.com/company/history/founding-story/) (<https://info.mobilerobot.com/company/history/founding-story/>).

Team Members

The people working at The Mobile Robot Company are listed below. Leadership profiles are on the [Leadership](https://info.mobilerobot.com/company/team/leadership/) (<https://info.mobilerobot.com/company/team/leadership/>), page.

The team

Name	Role
Emil Hauch Jensen	Co-founder and CEO
Odin Kudahl Skovsted	Co-founder and CTO
Fernando Fandiño Oliver	Senior Vice President EMEA
Pratheesh Prakash	Team member
Regine Candido	Team member
Abdelrahman Nasr	Team member
Swati Gupta	Team member

Working at the company

The company is headquartered in Hvidovre, Denmark — see [Headquarters](https://info.mobilerobot.com/company/locations/headquarters/) (<https://info.mobilerobot.com/company/locations/headquarters/>), — and welcomes people interested in shaping the future of automation. See [Working With Us](https://info.mobilerobot.com/company/careers/working-with-us/) (<https://info.mobilerobot.com/company/careers/working-with-us/>).

Contact People

Use this page to find the right person or channel at The Mobile Robot Company. Postal address and general channels are also listed under [Contact Information](https://info.mobilerobot.com/company/locations/contact-information/) (<https://info.mobilerobot.com/company/locations/contact-information/>).

Contact directory

Purpose	Contact
General inquiries	hello@mobilerobot.com · +45 88 10 90 12
Website	www.mobilerobot.com (https://www.mobilerobot.com)
CEO and media	Emil Hauch Jensen · emil@mobilerobot.com · +45 88 10 90 12
EMEA and interviews	Fernando Fandiño Oliver · fernando.fandino.oliver@mobilerobot.com · +34 649 999 802

Who handles what

- **Emil Hauch Jensen**, co-founder and CEO, is the company's principal spokesperson and the contact for [media and press inquiries](https://info.mobilerobot.com/newsroom/media-kit/media-contacts/) (<https://info.mobilerobot.com/newsroom/media-kit/media-contacts/>).
- **Fernando Fandiño Oliver**, Senior Vice President EMEA, is the contact for interviews and business across Europe, the Middle East, and Africa.

Profiles for both are on the [Leadership](https://info.mobilerobot.com/company/team/leadership/) (<https://info.mobilerobot.com/company/team/leadership/>) page.

Sales, trials, and support

Customer inquiries about demonstrations, trials, and purchases are routed through [the company's partner network](https://info.mobilerobot.com/products/buying-and-deployment/fin-d-a-local-partner/) (<https://info.mobilerobot.com/products/buying-and-deployment/fin-d-a-local-partner/>) — start at www.mobilerobot.com (<https://www.mobilerobot.com>) or the

Support section (<https://info.mobilerobot.com/category/support/>). Prospective partners can apply through the Partners section (<https://info.mobilerobot.com/category/partners/>).

Locations

Where The Mobile Robot Company is based, where the J1600 is tested and demonstrated, and how to get in touch.



Headquarters

The Mobile Robot Company ApS is headquartered at Kettevej 45, 2650 Hvidovre, Denmark, where its products are also made.



Test and Demonstration Facility

The Mobile Robot Company's Copenhagen demo and test area, where the J1600 is validated under intentionally real-world conditions and customers can run trials.



Contact Information

How to reach The Mobile Robot Company — postal address, general email and telephone, website, and social channels.

Headquarters

The Mobile Robot Company ApS is headquartered in Hvidovre, Denmark, in the Copenhagen area.

Address

The Mobile Robot Company ApS Kettevej 45 2650 Hvidovre Denmark

Made in Denmark

The company is Danish, founded in November 2024, and the [J1600](https://info.mobilerobot.com/products/j1600/overview/) is manufactured in Denmark.

Visiting

Prospects who want to see the J1600 in operation can arrange a visit to the company's Copenhagen [test and demonstration facility](https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/), or a demonstration through [a local partner](https://info.mobilerobot.com/products/buying-and-deployment/find-a-local-partner/). For contact channels, see [Contact Information](https://info.mobilerobot.com/company/locations/contact-information/).

Test and Demonstration Facility

The Mobile Robot Company operates a demo and test area in the Copenhagen area. It serves two purposes: validating the [J1600](https://info.mobilerobot.com/products/j1600/overview/) under realistic conditions, and giving prospects a place to test the robot before buying.

Real-world validation conditions

The facility is used for validation under intentionally real-world conditions, including:

- uneven flooring;
- water-filled test loads;
- multiple simultaneous test setups.

The goal is to prove the robot in conditions that resemble actual warehouses rather than idealized lab floors. The J1600's operating limits still apply — automatic driving is an indoor, level-floor application.

Customer visits and trials

Customers can visit the facility for [demonstrations](https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/) and trials. For a [proof of concept](https://info.mobilerobot.com/applications/planning/proof-of-concept-planning/), machines can instead be taken to the customer's own plant, so the evaluation runs under the customer's real conditions. Evaluation routes — demonstration, [two-week paid trial](https://info.mobilerobot.com/products/buying-and-deployment/two-week-trial/), and proof of concept — are described in the [Support section](https://info.mobilerobot.com/category/support/) and through the [partner network](https://info.mobilerobot.com/category/partners/).

Arranging a visit

Contact the company at hello@mobilerobot.com or through www.mobilerobot.com to arrange a test or demonstration. See [Contact Information](https://info.mobilerobot.com/company/locations/contact-information/).



Contact Information

All general contact channels for The Mobile Robot Company. For named contacts by role, see [Contact People](https://info.mobilerobot.com/company/team/contact-people/) (<https://info.mobilerobot.com/company/team/contact-people/>).

Postal address

The Mobile Robot Company ApS Kettevej 45 2650 Hvidovre Denmark

General channels

Channel	Detail
Email	hello@mobilerobot.com
Telephone	+45 88 10 90 12
Website	www.mobilerobot.com (https://www.mobilerobot.com)

Media and regional contacts

Purpose	Contact
CEO and media	Emil Hauch Jensen · emil@mobilerobot.com · +45 88 10 90 12
EMEA and interviews	Fernando Fandiño Oliver · fernando.fandino.oliver@mobilerobot.com · +34 649 999 802

Social channels

- [LinkedIn](https://www.linkedin.com/company/the-mobile-robot-company/) (<https://www.linkedin.com/company/the-mobile-robot-company/>)
- [Facebook](https://www.facebook.com/TheMobileRobotCompany) (<https://www.facebook.com/TheMobileRobotCompany>)
- [Instagram](https://www.instagram.com/themobilerobotcompany/) (<https://www.instagram.com/themobilerobotcompany/>)

- [TikTok \(https://www.tiktok.com/@themobilerobotcompany\)](https://www.tiktok.com/@themobilerobotcompany)
- [YouTube Shorts \(https://www.youtube.com/@the-mobile-robot-company/shorts\)](https://www.youtube.com/@the-mobile-robot-company/shorts)

Product and technical questions

Common product questions are answered in the [FAQ \(https://info.mobilerobot.com/support/faq/product-and-capabilities/\)](https://info.mobilerobot.com/support/faq/product-and-capabilities/). Customers with a technical issue can also send a request directly from the machine: the J1600's Help/Support menu provides a QR code for submitting technical requests. More support routes are in the [Support section \(https://info.mobilerobot.com/category/support/\)](https://info.mobilerobot.com/category/support/).

Careers

Working at The Mobile Robot Company and how to apply, including general applications when no specific role is listed.



Working With Us

What The Mobile Robot Company works on, the philosophy behind its products, and how people interested in shaping the future of automation can get in touch.



General Applications

How to send a confidential general application to The Mobile Robot Company when no advertised role matches your profile.

Working With Us

[The Mobile Robot Company](https://info.mobilerobot.com/company/about/company-overview/) (<https://info.mobilerobot.com/company/about/company-overview/>) is a Danish robotics company [headquartered in Hvidovre](https://info.mobilerobot.com/company/locations/headquarters/) (<https://info.mobilerobot.com/company/locations/headquarters/>), in the Copenhagen area. It builds mobile robot solutions for internal material handling — starting with the [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>), [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>), self-driving pallet jack, which is made in Denmark.

What you would be part of

The company was founded in November 2024 by two robotics veterans who had collectively deployed more than 10,000 robots and concluded that robot projects were too hard, too slow, and too complex. The [mission](https://info.mobilerobot.com/company/about/mission-and-vision/) (<https://info.mobilerobot.com/company/about/mission-and-vision/>) is to make mobile robots operator-centric, easier to use, and more flexible — see the [Founding Story](https://info.mobilerobot.com/company/history/founding-story/) (<https://info.mobilerobot.com/company/history/founding-story/>).

The first chapter has moved quickly: first product launched by January 2026, the [IFOY Industrial Truck of the Year 2026 award](https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/) (<https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/>) won by June 2026, and [distributor partners in eight countries](https://info.mobilerobot.com/company/history/growth-and-international-expansion/) (<https://info.mobilerobot.com/company/history/growth-and-international-expansion/>). The team spans engineering, commercial, and regional roles — see [Team Members](https://info.mobilerobot.com/company/team/team-members/) (<https://info.mobilerobot.com/company/team/team-members/>).

The philosophy you would build on

The company's products keep a human in the loop: robots handle repetitive transport, people keep judgment, task initiation, and takeover. This [human-in-the-loop philosophy](https://info.mobilerobot.com/company/about/human-in-the-loop-philosophy/) (<https://info.mobilerobot.com/company/about/human-in-the-loop-philosophy/>) shapes engineering priorities — no-code operation, roughly 30-minute operator training, and deployment without mandatory IT integration.

Getting in touch

People interested in shaping the future of automation can send a confidential message through the **Join Our Team** link on www.mobilerobot.com (<https://www.mobilerobot.com>). Inquiries are treated confidentially. If no advertised role fits, see [General Applications](https://info.mobilerobot.com/company/careers/general-applications/) (<https://info.mobilerobot.com/company/careers/general-applications/>).

General Applications

The Mobile Robot Company welcomes messages from people interested in shaping the future of automation, whether or not a specific vacancy is advertised.

How to apply

Send a confidential message through the **Join Our Team** link on www.mobilerobot.com (<https://www.mobilerobot.com>). Applications and inquiries are treated confidentially.

What to include

There is no fixed application format. Describe your background and what you want to contribute. The company's work spans robotics engineering, commercial and partner development, and regional business roles — see [Team Members](https://info.mobilerobot.com/company/team/team-members/) (<https://info.mobilerobot.com/company/team/team-members/>) for the current team and [Working With Us](https://info.mobilerobot.com/company/careers/working-with-us/) (<https://info.mobilerobot.com/company/careers/working-with-us/>) for what the company builds and believes.

Collaborations

Technology collaborations, industry programs, and public funding that support The Mobile Robot Company's work.



Technology Collaborations

The Mobile Robot Company's technology collaborations, including work with ALCA Technologies in Italy and cooperation with established VDA 5050 fleet-management providers.



Industry Programs

The industry programs and recognitions The Mobile Robot Company participates in — NVIDIA Inception, Innovation Fund Denmark support, and The Robot Report's Startup Radar 2025.



Innovation Fund Denmark

The Mobile Robot Company receives financial backing and strategic guidance from Innovation Fund Denmark to accelerate product development and commercialization, announced 6 March...



NVIDIA Inception

The Mobile Robot Company joined the NVIDIA Inception startup program in November 2025, gaining access to advanced technology, expertise, and go-to-market resources.

Technology Collaborations

The Mobile Robot Company works with technology partners that bring the [J1600](https://info.mobilerobot.com/products/j1600/overview/) into real customer environments and connect it to the wider automation ecosystem.

ALCA Technologies

The company collaborates with **ALCA Technologies S.r.l.** in Italy and [publicly highlighted the collaboration and continued partnership on 8 July 2026](https://info.mobilerobot.com/newsroom/press-releases/partner-announcements/). ALCA Technologies also supported the J1600 demonstrations at the United Symbol Open House 2026 in Sassuolo, Modena, Italy, held over three days ending 29 June 2026.

Application focus

The collaboration illustrates warehouse conditions that can disrupt rigid automation:

- broken pallets;
- loose strapping;
- hanging stretch wrap;
- dust;
- other imperfect or changing handling conditions.

The J1600 addresses these cases through [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/): the operator uses experience and situational awareness during pallet pickup, while the vehicle performs the repetitive autonomous transport.

Presented outcomes

Less [non-value-added walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/); safer pallet handling; smoother material flow; higher productivity; and better adaptability in dynamic warehouse environments.

United Symbol Open House 2026

At the [United Symbol Open House](https://info.mobilerobot.com/newsroom/events/past-events/) (<https://info.mobilerobot.com/newsroom/events/past-events/>) in Sassuolo, industry leaders and end customers from multiple industries saw dual-mode operation live and discussed warehouse efficiency, reduced manual handling, scalable automation, and everyday intralogistics problems with the team. United Symbol hosted the event; ALCA Technologies provided local support.

VDA 5050 fleet-management providers

The J1600 has full [VDA 5050](https://info.mobilerobot.com/products/software/vda-5050/) (<https://info.mobilerobot.com/products/software/vda-5050/>) support under its Advanced software, and the company works with established VDA 5050 fleet-management providers. The interface allows robots from different vendors to coexist under a compatible fleet layer. See the [glossary entry for VDA 5050](https://info.mobilerobot.com/documentation/concepts/glossary/) (<https://info.mobilerobot.com/documentation/concepts/glossary/>).

Related programs

Beyond project collaborations, the company participates in [industry programs](https://info.mobilerobot.com/company/collaborations/industry-programs/) (<https://info.mobilerobot.com/company/collaborations/industry-programs/>), including [NVIDIA Inception](https://info.mobilerobot.com/company/collaborations/nvidia-inception/) (<https://info.mobilerobot.com/company/collaborations/nvidia-inception/>), and receives support from [Innovation Fund Denmark](https://info.mobilerobot.com/company/collaborations/innovation-fund-denmark/) (<https://info.mobilerobot.com/company/collaborations/innovation-fund-denmark/>). Commercial distribution and service partnerships are described in the [Partners section](https://info.mobilerobot.com/category/partners/) (<https://info.mobilerobot.com/category/partners/>).

Industry Programs

The Mobile Robot Company participates in industry programs that provide technology access, funding, and visibility for its work on intelligent mobile robotics.

NVIDIA Inception

The company joined the NVIDIA Inception program in November 2025. The program provides startups with advanced technology, expertise, and go-to-market resources. Details are on the [NVIDIA Inception](https://info.mobilerobot.com/company/collaborations/nvidia-inception/) (https://info.mobilerobot.com/company/collaborations/nvidia-inception/), page.

Innovation Fund Denmark

The company receives financial backing and strategic guidance from Innovation Fund Denmark, [announced on 6 March 2026](https://info.mobilerobot.com/newsroom/press-releases/funding-and-collaborations/) (https://info.mobilerobot.com/newsroom/press-releases/funding-and-collaborations/), to accelerate product development and commercialization of next-generation intelligent mobile robotics. Details are on the [Innovation Fund Denmark](https://info.mobilerobot.com/company/collaborations/innovation-fund-denmark/) (https://info.mobilerobot.com/company/collaborations/innovation-fund-denmark/), page.

The Robot Report Startup Radar 2025

In November 2025 the company was named to The Robot Report's [100 Robotics Startups to Watch — Startup Radar 2025](https://info.mobilerobot.com/newsroom/awards/startup-recognition/) (https://info.mobilerobot.com/newsroom/awards/startup-recognition/). The recognition is connected to "tap-to-go" autonomy for factories, third-party-logistics warehouses, and e-commerce fulfillment, with listed outcomes of reclaiming walk time, stabilizing material flow, increasing throughput without infrastructure overhaul, and deploying in hours rather than months.

Award programs

The J1600 also completed the IFOY AWARD 2026 program — finalist announcement, three-stage audit, [Best in Intralogistics Certificate](https://info.mobilerobot.com/newsroom/awards/best-in-intralogistics/) (https://info.mobilerobot.com/newsroom/awards/best-in-intralogistics/), and the [Industrial Truck of the Year 2026 win](https://info.mo) (https://info.mo

[bilerobot.com/newsroom/awards/ifoy-award-2026/](https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/)). Coverage is in the [Newsroom](https://info.mobilerobot.com/category/newsroom/) (<https://info.mobilerobot.com/category/newsroom/>) and the milestone sequence in [Company Milestones](https://info.mobilerobot.com/company/history/company-milestones/) (<https://info.mobilerobot.com/company/history/company-milestones/>).

Innovation Fund Denmark

The Mobile Robot Company receives financial backing and strategic guidance from **Innovation Fund Denmark**. The support was [announced on 6 March 2026](https://info.mobilerobot.com/newsroom/press-releases/funding-and-collaborations/) (<https://info.mobilerobot.com/newsroom/press-releases/funding-and-collaborations/>).

Purpose of the support

The backing accelerates product development and commercialization of next-generation intelligent mobile robotics for manufacturing, warehouse, and logistics environments — the field the company entered with the [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>) [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>) self-driving pallet jack.

Significance for the company

CEO Emil Hauch Jensen described the support as validation of the company's technology and [vision](https://info.mobilerobot.com/company/about/mission-and-vision/) (<https://info.mobilerobot.com/company/about/mission-and-vision/>), expected to accelerate key milestones and product development. The announcement came during the company's first commercial year, between the J1600's January 2026 launch and its [IFOY Industrial Truck of the Year 2026 win](https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/) (<https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/>) — see [Company Milestones](https://info.mobilerobot.com/company/history/company-milestones/) (<https://info.mobilerobot.com/company/history/company-milestones/>).

Related programs

The company also participates in [NVIDIA Inception](https://info.mobilerobot.com/company/collaborations/nvidia-inception/) (<https://info.mobilerobot.com/company/collaborations/nvidia-inception/>), and other [industry programs](https://info.mobilerobot.com/company/collaborations/industry-programs/) (<https://info.mobilerobot.com/company/collaborations/industry-programs/>).

NVIDIA Inception

The Mobile Robot Company joined the **NVIDIA Inception** program in November 2025. NVIDIA Inception provides startups with advanced technology, expertise, and go-to-market resources.

Why it matters for the company

Access to NVIDIA's AI ecosystem and technical support can accelerate the development of intelligent mobile robotics and scalable warehouse and logistics automation. The connection is practical as well as strategic: the [J1600](https://info.mobilerobot.com/products/j1600/overview/) runs its [3D LiDAR SLAM navigation](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) on an industrial NVIDIA Jetson AI computer — see the [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/).

Timing

Membership was [announced in November 2025](https://info.mobilerobot.com/newsroom/press-releases/funding-and-collaborations/), the same month the company entered [The Robot Report's 100 Robotics Startups to Watch](https://info.mobilerobot.com/newsroom/awards/startup-recognition/) and shortly after the J1600's [recorded market launch](https://info.mobilerobot.com/company/history/product-launch-timeline/) on 20 October 2025. The full sequence is in [Company Milestones](https://info.mobilerobot.com/company/history/company-milestones/).

Related programs

See [Industry Programs](https://info.mobilerobot.com/company/collaborations/industry-programs/) for the company's other program participations and [Innovation Fund Denmark](https://info.mobilerobot.com/company/collaborations/innovation-fund-denmark/) for its public funding support.

Newsroom

News, media kit, awards, events, and videos.



Press Releases

5 pages



Media Kit

7 pages



Awards and Recognition

5 pages



Events and Webinars

4 pages



Videos

6 pages



Stories and Updates

5 pages

Press Releases

Confirmed company, product, partner, award, and funding milestones from The Mobile Robot Company, organized by topic.



Company News

Confirmed corporate milestones from The Mobile Robot Company, including the November 2024 founding, the January 2026 EMEA leadership appointment, and the eight-country...



Product Announcements

J1600 product milestones from The Mobile Robot Company, including the 20 October 2025 market launch, pre-orders opening 2 December 2025, the January 2026 first-product launch,...



Partner Announcements

Partner-network news from The Mobile Robot Company, including the ALCA Technologies collaboration, the United Symbol Open House 2026 demonstration in Italy, and the eight-...



Awards

Recognition received by The Mobile Robot Company and the J1600, including the IFOY AWARD 2026 Industrial Truck of the Year, the Best in Intralogistics Certificate, and The Robot Report...



Funding and Collaborations

[Funding and program news from The Mobile Robot Company, including support from Innovation Fund Denmark announced 6 March 2026 and joining the NVIDIA Inception program in...](#)

Company News

Confirmed [corporate milestones](https://info.mobilerobot.com/company/history/company-milestones/) for The Mobile Robot Company ApS, newest first. Product launches are covered in [Product Announcements](https://info.mobilerobot.com/newsroom/press-releases/product-announcements/), award news in [Awards](https://info.mobilerobot.com/newsroom/press-releases/awards/), and funding news in [Funding and Collaborations](https://info.mobilerobot.com/newsroom/press-releases/funding-and-collaborations/).

June 2026 — Distributor partners in eight countries

By 26 June 2026, The Mobile Robot Company had [distributor partnerships in eight countries](https://info.mobilerobot.com/company/history/growth-and-international-expansion/), with the network continuing to expand. The company [sells through an international network](https://info.mobilerobot.com/company/about/business-model/) of distributors, integrators, and service partners rather than directly to end users: partners deliver local demonstrations, trials, deployment, and service, while the company supplies robots, parts, software, technical support, training, and leads. See [Partner Announcements](https://info.mobilerobot.com/newsroom/press-releases/partner-announcements/) and [Partners](https://info.mobilerobot.com/category/partners/).

12 January 2026 — Fernando Fandiño Oliver appointed Senior Vice President EMEA

Fernando Fandiño Oliver joined The Mobile Robot Company as Senior Vice President EMEA, announced in a release dated 12 January 2026. His remit covers regional business development, market expansion, customer and partner relationships, strategic initiatives, and execution of the company's long-term growth strategy across Europe, the Middle East, and Africa.

His international career in mobile robotics and intralogistics includes leading regional business and market-expansion strategies in EMEA, developing and managing partner and integrator networks, and executing mobile-robotics projects in complex industrial environments. A full profile is in [Executive Biographies](https://info.mobilerobot.com/newsroom/media-kit/executive-biographies/).

November 2024 — The Mobile Robot Company is founded

Emil Hauch Jensen and Odin Kudahl Skovsted founded [The Mobile Robot Company ApS](https://info.mobilerobot.com/company/about/company-overview/) in November 2024. The company is [headquartered in Hvidovre, Denmark](https://info.mobilerobot.com/company/locations/headquarters/), and develops mobile robot solutions for internal material handling in warehouses, factories, production environments, and logistics operations.

Before [founding the company](https://info.mobilerobot.com/company/history/founding-story/), the two founders had collectively completed projects for hundreds of customers and deployed more than 10,000 robots. They concluded that robot projects were too hard, too slow, and too complex, and formed the company to make mobile robots more [operator-centric](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/), easier to use, and more flexible. See [Company](https://info.mobilerobot.com/category/company/) for the full company story.

A fast first chapter

The company's early timeline moved quickly: founded in November 2024, first product launched by January 2026, a major international award won by June 2026, and distributors active in eight countries. The detailed product timeline is in [Product Announcements](https://info.mobilerobot.com/newsroom/press-releases/product-announcements/); the award timeline is in [Awards](https://info.mobilerobot.com/newsroom/press-releases/awards/).

Media inquiries

Contact details for press are in [Media Contacts](https://info.mobilerobot.com/newsroom/media-kit/media-contacts/). Ready-to-use company text is in the [Company Boilerplate](https://info.mobilerobot.com/newsroom/media-kit/company-boilerplate/).

Product Announcements

Product milestones for the [J1600 self-driving pallet jack](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>), The Mobile Robot Company's first product. Award news is in [Awards](https://info.mobilerobot.com/newsroom/press-releases/awards/) (<https://info.mobilerobot.com/newsroom/press-releases/awards/>).

DISTINCT MILESTONES

Market launch, pre-orders, first-product launch, and shipping refer to [four different milestones](https://info.mobilerobot.com/company/history/product-launch-timeline/) (<https://info.mobilerobot.com/company/history/product-launch-timeline/>). They should not be collapsed into a single launch date.

29 January 2026 — Technical webinar series launches

The company announced its [2026 technical webinar series](https://info.mobilerobot.com/newsroom/events/technical-webinars/) (<https://info.mobilerobot.com/newsroom/events/technical-webinars/>) on 29 January 2026, beginning with a deep dive on the J1600. The series targets manufacturing and intralogistics organizations seeking higher throughput, lower labor dependency, greater flexibility, and supply-chain resilience through scalable pallet transport automation.

Announced focus areas include ROI modeling for autonomous pallet transport; deployment methodology and site preparation; navigation, safety, and operational integration; production logistics, [buffer management](https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/) (<https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/>), and warehouse use cases; scaling across workflows or sites; and labor allocation, material-flow efficiency, and operational agility.

On the same date, the company announced the J1600 as an IFOY finalist — see [Awards](https://info.mobilerobot.com/newsroom/press-releases/awards/) (<https://info.mobilerobot.com/newsroom/press-releases/awards/>).

January 2026 — The J1600 launches as the company's first product

The J1600 launched in January 2026 as The Mobile Robot Company's first product: a compact, electric, [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>) self-driving pallet jack for indoor, floor-to-floor pallet transport. It can be operated with a

tiller like a conventional walk-behind electric pallet jack or sent autonomously to saved locations, carries up to 1,600 kg, and supports manual pick and drop up to 1,600 mm. Shipping was scheduled for Q2 2026.

Key launch-time facts are summarized in the [J1600 Fact Sheet](https://info.mobilerobot.com/newsroom/media-kit/j1600-fact-sheet/) (<https://info.mobilerobot.com/newsroom/media-kit/j1600-fact-sheet/>); full specifications are in [Technical Specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

2 December 2025 — J1600 pre-orders open

Pre-orders for the J1600 opened on 2 December 2025. The J1600 [costs from €65,000](https://info.mobilerobot.com/products/j1600/pricing-and-roi/) (<https://info.mobilerobot.com/products/j1600/pricing-and-roi/>), with 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/>), available at €4,000 including setup and support.

20 October 2025 — Market launch

The J1600's market launch was 20 October 2025. This preceded the opening of pre-orders in December 2025 and the first-product launch in January 2026.

Media resources

Product facts for coverage are in the [J1600 Fact Sheet](https://info.mobilerobot.com/newsroom/media-kit/j1600-fact-sheet/) (<https://info.mobilerobot.com/newsroom/media-kit/j1600-fact-sheet/>). Press contacts are in [Media Contacts](https://info.mobilerobot.com/newsroom/media-kit/media-contacts/) (<https://info.mobilerobot.com/newsroom/media-kit/media-contacts/>).

Partner Announcements

News about The Mobile Robot Company's partner network. The company sells the [J1600](https://info.mobilerobot.com/products/j1600/overview/) through distributors, integrators, and service partners worldwide; see [Partners](https://info.mobilerobot.com/category/partners/) for how the partner program works.

8 July 2026 — ALCA Technologies collaboration

On 8 July 2026, The Mobile Robot Company thanked [ALCA Technologies S.r.l.](https://info.mobilerobot.com/company/collaborations/technology-collaborations/) for collaboration and continued partnership. ALCA Technologies also supported the United Symbol Open House 2026 in Italy.

The collaboration illustrates warehouse conditions that can disrupt rigid automation: broken pallets, loose strapping, hanging stretch wrap, dust, and other imperfect or changing handling conditions. The J1600 addresses these cases through [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/): the operator uses experience and situational awareness during pallet pickup, while the vehicle performs the repetitive autonomous transport. The outcomes include less [non-value-added walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/), safer pallet handling, smoother material flow, higher productivity, and better adaptability in dynamic warehouse environments.

27–29 June 2026 — J1600 demonstrated at the United Symbol Open House

The J1600 was demonstrated at the [United Symbol Open House](https://info.mobilerobot.com/newsroom/events/past-events/) in Sassuolo, Modena, Italy, over three days ending 29 June 2026, with local support from ALCA Technologies S.r.l. The audience included industry leaders and end customers from multiple industries.

Visitors saw dual-mode operation and discussed warehouse efficiency, reduced manual handling, scalable warehouse automation, and everyday intralogistics problems with the team. On 30 June, the company thanked United Symbol for hosting and ALCA Technologies for support, professionalism, and collaboration.

June 2026 — Distributor partners in eight countries

By 26 June 2026, [distributor partnerships existed in eight countries](https://info.mobilerobot.com/company/history/growth-and-international-expansion/) (<https://info.mobilerobot.com/company/history/growth-and-international-expansion/>) and the network was expanding. The J1600 is available worldwide, including in the United States, Canada, Australia, and China; contact the company or a local partner for [country-specific availability](https://info.mobilerobot.com/partners/become-a-partner/country-availability/) (<https://info.mobilerobot.com/partners/become-a-partner/country-availability/>) and commercial terms.

Becoming a partner

[Qualified integrators, distributors, and service partners](https://info.mobilerobot.com/partners/become-a-partner/who-we-are-looking-for/) (<https://info.mobilerobot.com/partners/become-a-partner/who-we-are-looking-for/>), [can apply by country](https://info.mobilerobot.com/partners/program/application-process/) (<https://info.mobilerobot.com/partners/program/application-process/>) to join the global network. Partners maintain local demonstration capability, run trials, and deliver installation and service; the company supplies robots, parts, software, training, technical support, and leads. See [Partners](https://info.mobilerobot.com/category/partners/) (<https://info.mobilerobot.com/category/partners/>).

Media inquiries

Press contacts are in [Media Contacts](https://info.mobilerobot.com/newsroom/media-kit/media-contacts/) (<https://info.mobilerobot.com/newsroom/media-kit/media-contacts/>).

Awards

Recognition received by The Mobile Robot Company and the [J1600 self-driving pallet jack](https://info.mobilerobot.com/products/j1600/overview/) (https://info.mobilerobot.com/products/j1600/overview/), newest first.

26 June 2026 — J1600 wins IFOY AWARD 2026 Industrial Truck of the Year

The J1600 won the [IFOY AWARD 2026](https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/) (https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/) in the Industrial Truck of the Year category. The result was announced on 26 June 2026, following the winner ceremony held in Stuttgart on 25 June 2026 before approximately 150 guests from industry, academia, politics, and media.

IFOY stands for International Intralogistics and Forklift Truck of the Year. The 2026 competition drew 49 products and solutions; 17 finalists completed the multi-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 winners were selected by an independent international jury of trade journalists. The J1600 competed in its category alongside products from established industrial-truck manufacturers. The award is supported by the VDMA Materials Handling and Intralogistics Association and the VDMA Robotics + Automation Association.

Key reasons for the recognition include:

- a new product tier between manual pallet jacks and classic [automated guided vehicles \(AGVs\)](https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/) (https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/);
- [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (https://info.mobilerobot.com/products/j1600/dual-mode/) manual and autonomous operation;
- low implementation barrier and intuitive operation;
- [3D LiDAR SLAM navigation](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) and a [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;
- immediate human takeover;
- up to 80% reduction in manual work on repetitive transport;
- applicability to SMEs and single-shift sites;
- optional integration with VDA 5050 and API scale-up.

IFOY Innovation Check ratings

The scientific [IFOY Innovation Check](https://info.mobilerobot.com/newsroom/awards/ifoy-innovation-check/) (<https://info.mobilerobot.com/newsroom/awards/ifoy-innovation-check/>), — involving Fraunhofer IML, Fraunhofer IPA, the Technical University of Munich, and TU Dresden — called the J1600 a "game changer" for low-threshold intralogistics automation.

Criterion	Rating
Functionality / type of implementation	++ (very good)
Novelty / innovation	+ (good)
Customer benefits	+ (good)
Market relevance	+ (good)

16 April 2026 — Best in Intralogistics Certificate

The Mobile Robot Company received the 2026 [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 at TEST CAMP INTRALOGISTICS in Dortmund's Westfalenhalle. The certificate recognizes IFOY finalists that successfully complete the three-stage audit — practical testing, the scientific Innovation Check, and jury assessment — covering efficiency, sustainability, safety, and usability. The Chairman of the Board of the VDMA Materials Handling and Intralogistics Association formally presented the certificate.

29 January 2026 — J1600 announced as IFOY finalist

The company announced the J1600 as an IFOY finalist on 29 January 2026. The finalists then completed the IFOY Audit and Test at TEST CAMP INTRALOGISTICS, held 15–17 April 2026 in Dortmund, where the J1600 made its first public appearance.

November 2025 — The Robot Report's 100 Robotics Startups to Watch

The Mobile Robot Company was named to The Robot Report's "[100 Robotics Startups to Watch — Startup Radar 2025](https://info.mobilerobot.com/newsroom/awards/startup-reco-to-watch)" (<https://info.mobilerobot.com/newsroom/awards/startup-reco-to-watch>)

[gnition/\)](#) in November 2025. The recognition is connected to "tap-to-go" autonomy for factories, third-party-logistics warehouses, and e-commerce fulfillment, with listed outcomes of reclaiming walk time, stabilizing material flow, increasing throughput without infrastructure overhaul, and deploying in hours rather than months.

Media resources

Company facts for award coverage are in the [Company Fact Sheet](https://info.mobilerobot.com/newsroom/media-kit/company-fact-sheet/) (<https://info.mobilerobot.com/newsroom/media-kit/company-fact-sheet/>) and the [J1600 Fact Sheet](https://info.mobilerobot.com/newsroom/media-kit/j1600-fact-sheet/) (<https://info.mobilerobot.com/newsroom/media-kit/j1600-fact-sheet/>). Press contacts are in [Media Contacts](https://info.mobilerobot.com/newsroom/media-kit/media-contacts/) (<https://info.mobilerobot.com/newsroom/media-kit/media-contacts/>).

Funding and Collaborations

Funding and program milestones for The Mobile Robot Company, newest first. Partner-network collaborations are covered in [Partner Announcements](https://info.mobilerobot.com/newsroom/press-releases/partner-announcements/) (<https://info.mobilerobot.com/newsroom/press-releases/partner-announcements/>).

6 March 2026 — Innovation Fund Denmark support

The Mobile Robot Company announced on 6 March 2026 that it received financial backing and strategic guidance from [Innovation Fund Denmark](https://info.mobilerobot.com/company/collaborations/innovation-fund-denmark/) (<https://info.mobilerobot.com/company/collaborations/innovation-fund-denmark/>) to accelerate product development and commercialization of next-generation intelligent mobile robotics.

[CEO Emil Hauch Jensen](https://info.mobilerobot.com/newsroom/media-kit/executive-biographies/) (<https://info.mobilerobot.com/newsroom/media-kit/executive-biographies/>) described the support as validation of the company's technology and [vision](https://info.mobilerobot.com/company/about/mission-and-vision/) (<https://info.mobilerobot.com/company/about/mission-and-vision/>) and expected it to accelerate key milestones and product development.

November 2025 — The company joins NVIDIA Inception

The Mobile Robot Company joined the [NVIDIA Inception](https://info.mobilerobot.com/company/collaborations/nvidia-inception/) (<https://info.mobilerobot.com/company/collaborations/nvidia-inception/>) program in November 2025. The program provides startups with advanced technology, expertise, and go-to-market resources.

Access to NVIDIA's AI ecosystem and technical support can accelerate intelligent mobile-robotics development and scalable warehouse and logistics automation. The [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>) uses an industrial NVIDIA Jetson AI computer for its [3D LiDAR SLAM navigation](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>).

Media inquiries

Press contacts are in [Media Contacts](https://info.mobilerobot.com/newsroom/media-kit/media-contacts/) (<https://info.mobilerobot.com/newsroom/media-kit/media-contacts/>). Company background text is in the [Company Boilerplate](https://info.mobilerobot.com/newsroom/media-kit/company-boilerplate/) (<https://info.mobilerobot.com/newsroom/media-kit/company-boilerplate/>).

bot.com/newsroom/media-kit/company-boilerplate/).

Media Kit

Boilerplate text, fact sheets, logos, biographies, and contact details for journalists and media covering The Mobile Robot Company.



Company Boilerplate

Ready-to-use short and long descriptions of The Mobile Robot Company for press releases, articles, and event programs.



Company Fact Sheet

Key facts about The Mobile Robot Company ApS for journalists — founding, founders, headquarters, leadership, business model, milestones, and contact channels.



J1600 Fact Sheet

Media fact sheet for the J1600 dual-mode self-driving pallet jack — key specifications, safety, compliance, software, list pricing, launch dates, and recognition.



Logos

Download The Mobile Robot Company logo in SVG and PNG formats for use in articles, event programs, and press coverage.



Executive Biographies

[Biographies of The Mobile Robot Company's leadership — co-founder and CEO Emil Hauch Jensen, co-founder and CTO Odin Kudahl Skovsted, and Senior Vice President EMEA Fernando...](#)



Brand Guidelines

[Naming, product terminology, taglines, and messaging conventions for referring to The Mobile Robot Company and the J1600 in media and partner materials.](#)



Media Contacts

[Press and interview contacts at The Mobile Robot Company, including the CEO for media inquiries and the Senior Vice President EMEA for regional interviews.](#)

Company Boilerplate

Standard descriptions of [The Mobile Robot Company](https://info.mobilerobot.com/company/about/company-overview/) (<https://info.mobilerobot.com/company/about/company-overview/>) for use in press coverage, articles, and event programs. Both versions may be used as written. Supporting figures are in the [Company Fact Sheet](https://info.mobilerobot.com/newsroom/media-kit/company-fact-sheet/) (<https://info.mobilerobot.com/newsroom/media-kit/company-fact-sheet/>) and the [J1600 Fact Sheet](https://info.mobilerobot.com/newsroom/media-kit/j1600-fact-sheet/) (<https://info.mobilerobot.com/newsroom/media-kit/j1600-fact-sheet/>).

Short boilerplate

The Mobile Robot Company ApS is a Danish robotics company, founded in November 2024 and headquartered in Hvidovre, Denmark. Its first product, the J1600, is a dual-mode self-driving pallet jack that won the IFOY AWARD 2026 Industrial Truck of the Year.

Long boilerplate

The Mobile Robot Company ApS is a Danish robotics company that develops mobile robot solutions for internal material handling in warehouses, factories, production environments, and logistics operations. It was founded in November 2024 by [Emil Hauch Jensen and Odin Kudahl Skovsted](https://info.mobilerobot.com/newsroom/media-kit/executive-biographies/) (<https://info.mobilerobot.com/newsroom/media-kit/executive-biographies/>) and is headquartered in Hvidovre, Denmark.

Its first product, the J1600, is a dual-mode self-driving pallet jack made in Denmark. The J1600 can be operated manually like a conventional electric pallet jack or sent autonomously to saved locations, carrying loads up to 1,600 kg. It targets the gap between flexible but repetitive manual pallet movement and expensive, complex full automation: the operator performs judgment-heavy pickup, exception handling, and task initiation, while the robot performs repetitive travel and floor-level drop-off.

The J1600 won the IFOY AWARD 2026 Industrial Truck of the Year. The company sells through an international network of distributors, integrators, and service partners, with distributor partnerships in eight countries as of June 2026. More information is available at www.mobilerobot.com (<https://www.mobilerobot.com>).

One-line description

Danish robotics company behind the J1600 dual-mode self-driving pallet jack, winner of the IFOY AWARD 2026 Industrial Truck of the Year.

Notes on usage

- The legal name is **The Mobile Robot Company ApS**; the company is also abbreviated **MRC**. See [Brand Guidelines](https://info.mobilerobot.com/newsroom/media-kit/brand-guidelines/) (<https://info.mobilerobot.com/newsroom/media-kit/brand-guidelines/>) for naming and messaging conventions.
- For interviews and quotes, contact the people listed in [Media Contacts](https://info.mobilerobot.com/newsroom/media-kit/media-contacts/) (<https://info.mobilerobot.com/newsroom/media-kit/media-contacts/>).

Company Fact Sheet

Verified company facts for media use. Product facts are in the [J1600 Fact Sheet](https://info.mobilerobot.com/newsroom/media-kit/j1600-fact-sheet/) (<https://info.mobilerobot.com/newsroom/media-kit/j1600-fact-sheet/>); ready-to-use prose is in the [Company Boilerplate](https://info.mobilerobot.com/newsroom/media-kit/company-boilerplate/) (<https://info.mobilerobot.com/newsroom/media-kit/company-boilerplate/>).

At a glance

Field	Information
Legal name	The Mobile Robot Company ApS (abbreviated "MRC")
Founded	November 2024
Founders	Emil Hauch Jensen and Odin Kudahl Skovsted
Headquarters	Kettevej 45, 2650 Hvidovre, Denmark
First product	J1600 self-driving pallet jack, made in Denmark
Website	www.mobilerobot.com (https://www.mobilerobot.com)
General email	hello@mobilerobot.com
General telephone	+45 88 10 90 12
Route to market	International distributor, integrator, and service-partner network
Distributor footprint (June 2026)	Eight countries
Main award	IFOY AWARD 2026 Industrial Truck of the Year

Leadership

Name	Role
Emil Hauch Jensen	Co-founder and CEO
Odin Kudahl Skovsted	Co-founder and CTO
Fernando Fandiño Oliver	Senior Vice President EMEA (since January 2026)

Full profiles are in [Executive Biographies](https://info.mobilerobot.com/newsroom/media-kit/executive-biographies/) (<https://info.mobilerobot.com/newsroom/media-kit/executive-biographies/>).

What the company does

[The Mobile Robot Company](https://info.mobilerobot.com/company/about/company-overview/) (<https://info.mobilerobot.com/company/about/company-overview/>) develops mobile robot solutions for internal material handling in warehouses, factories, production environments, and logistics operations. Its [mission](https://info.mobilerobot.com/company/about/mission-and-vision/) (<https://info.mobilerobot.com/company/about/mission-and-vision/>) is to redefine how robots assist people: robots remove tedious, repetitive movement so employees can focus on work requiring judgment, adaptability, and uniquely human insight. This philosophy is called [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 company focuses on horizontal, indoor pallet flows in [goods receiving](https://info.mobilerobot.com/applications/industries/goods-receiving/) (<https://info.mobilerobot.com/applications/industries/goods-receiving/>), storage, production, [staging](https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/) (<https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/>), [cross-docking](https://info.mobilerobot.com/applications/use-cases/cross-docking/) (<https://info.mobilerobot.com/applications/use-cases/cross-docking/>), and shipping. [Priority segments](https://info.mobilerobot.com/company/about/markets-we-serve/) (<https://info.mobilerobot.com/company/about/markets-we-serve/>) are small and medium businesses using one to five pallet-jack operators, plus larger sites with [local work cells](https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/) (<https://info.mobilerobot.com/applications/use-cases/local-work-cell-automation/>) too small or changeable for a conventional fleet project.

Business model

[List prices are public](https://info.mobilerobot.com/products/j1600/pricing-and-roi/) (<https://info.mobilerobot.com/products/j1600/pricing-and-roi/>), but [customer inquiries are routed through partners](https://info.mobilerobot.com/company/about/business-model/) (<https://info.mobilerobot.com/company/about/business-model/>). Partners deliver local demonstrations, trials, deployment, service, and customer relationships; the company supplies robots, parts, software, technical

support, training, and leads. 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. See [Partners](https://info.mobilerobot.com/category/partners/) (<https://info.mobilerobot.com/category/partners/>).

Milestone timeline

Date	Milestone
November 2024	Company founded in Denmark by Emil Hauch Jensen and Odin Kudahl Skovsted
20 October 2025	J1600 market launch
November 2025	Joins NVIDIA Inception; named to The Robot Report's 100 Robotics Startups to Watch
2 December 2025	J1600 pre-orders open
12 January 2026	Fernando Fandiño Oliver becomes Senior Vice President EMEA
January 2026	J1600 launches as the company's first product
29 January 2026	Technical webinar series launches; J1600 announced as IFOY finalist
6 March 2026	Innovation Fund Denmark support announced
15–17 April 2026	Participation in TEST CAMP INTRALOGISTICS in Dortmund
16 April 2026	J1600 receives the Best in Intralogistics Certificate
26 June 2026	J1600 wins IFOY AWARD 2026 Industrial Truck of the Year; distributor partners in eight countries
27–29 June 2026	J1600 demonstrated at the United Symbol Open House in Sassuolo, Italy

Details on each milestone are in [Press Releases](https://info.mobilerobot.com/newsroom/press-releases/company-news/) (<https://info.mobilerobot.com/newsroom/press-releases/company-news/>).

Founding background

Before [founding the company](https://info.mobilerobot.com/company/history/founding-story/) (<https://info.mobilerobot.com/company/history/founding-story/>), the two founders had collectively completed projects for hundreds of customers and deployed more than 10,000 robots. They concluded that robot projects were too hard, too slow, and too complex, and formed the company to make mobile robots more operator-centric, easier to use, and more flexible.

Social channels

[LinkedIn](https://www.linkedin.com/company/the-mobile-robot-company/) (<https://www.linkedin.com/company/the-mobile-robot-company/>) · [Facebook](https://www.facebook.com/TheMobileRobotCompany) (<https://www.facebook.com/TheMobileRobotCompany>) · [Instagram](https://www.instagram.com/themobilerobotcompany/) (<https://www.instagram.com/themobilerobotcompany/>) · [TikTok](https://www.tiktok.com/@themobilerobotcompany) (<https://www.tiktok.com/@themobilerobotcompany>) · [YouTube](https://www.youtube.com/@the-mobile-robot-company/shorts) (<https://www.youtube.com/@the-mobile-robot-company/shorts>)

Press contact

See [Media Contacts](https://info.mobilerobot.com/newsroom/media-kit/media-contacts/) (<https://info.mobilerobot.com/newsroom/media-kit/media-contacts/>).

J1600 Fact Sheet

Key facts about the J1600 for journalists and analysts. For the complete specification set, see [Technical Specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>); for the product story, see the [J1600 overview](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>).

What it is

The J1600 is The Mobile Robot Company's first product: a compact, electric, [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>), self-driving pallet jack for indoor, floor-to-floor pallet transport. It can be operated with a tiller like a conventional walk-behind electric pallet jack or sent autonomously to saved locations. The operator performs judgment-heavy pickup, [exception handling](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/) (<https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/>), and task initiation; the robot performs repetitive travel and floor-level drop-off. The company positions it in the space between a conventional electric pallet jack and a fully automated [AGV/AMR](https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/) (<https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/>) system, targeting [up to 80% reduction in manual work on repetitive transport](https://info.mobilerobot.com/applications/results/productivity-improvements/) (<https://info.mobilerobot.com/applications/results/productivity-improvements/>).

PRELIMINARY SPECIFICATIONS

The January 2026 specifications below are preliminary and subject to change.

Key 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 (forks lowered)	1,893 × 850 × 2,060 mm
Turning radius	1,501 mm
Navigation	3D LiDAR SLAM, no fixed infrastructure required
Compute	Industrial NVIDIA Jetson AI computer
Interface	15-inch multi-touch HMI, start/resume button, key switch
Battery	24 V, 200 Ah lithium iron phosphate (LiFePO4)
Runtime	Exceeds eight hours in a typical duty cycle
Ingress protection	IP21
Operating temperature	5–40°C / 41–104°F
Operator training	About 30 minutes
Basic deployment	Wi-Fi optional; no mandatory IT integration
Saved locations	No software limit
Manufacture	Made in Denmark

The 1.6 m lift is a manual capability; autonomous delivery is at floor level.

Safety

- 360-degree protective field with [speed-dependent zones that expand at higher speeds](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/>).
- Two 2D safety LiDAR scanners, separate from the 3D navigation LiDAR
- Independent safety controller, three emergency-stop buttons, and certified components
- Operator must confirm entry into automatic mode; blue floor lights display the protected area
- Immediate manual takeover by grabbing or moving the tiller

Details are 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/>).

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/>). Its preliminary [compliance list](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/) (<https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/>) includes the [Machinery Directive](https://info.mobilerobot.com/safety-compliance/standards/eu-machinery-requirements/) (<https://info.mobilerobot.com/safety-compliance/standards/eu-machinery-requirements/>) (2006/42/EC), the [EMC Directive \(2014/30/EU\)](#), the [Radio Equipment Directive \(2014/53/EU\)](#), [RoHS \(2011/65/EU\)](#), and the [EU Batteries Regulation \(2023/1542\)](#) (<https://info.mobilerobot.com/safety-compliance/standards/emc-red-rohs-and-battery-regulations/>), plus [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](https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/) (<https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/>), [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/>), and [UN 38.3 battery transport testing](https://info.mobilerobot.com/safety-compliance/certificates/battery-un-38-3-documentation/) (<https://info.mobilerobot.com/safety-compliance/certificates/battery-un-38-3-documentation/>).

Software

One hardware platform supports two software versions: [Standard software](https://info.mobilerobot.com/products/software/standard-software/) (<https://info.mobilerobot.com/products/software/standard-software/>) built around configuration-free [Teach and Repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>) for

single-unit deployments, and [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>) adding [VDA 5050](https://info.mobilerobot.com/products/software/vda-5050/) (<https://info.mobilerobot.com/products/software/vda-5050/>), interoperability, a [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/documentation/technical-integration/fleet-manager-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/>), and advanced mission planning.

List pricing (2026)

Item	End-user list price
J1600 self-driving pallet jack	from €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

A [typical customer configuration](https://info.mobilerobot.com/products/j1600/pricing-and-roi/) (<https://info.mobilerobot.com/products/j1600/pricing-and-roi/>) is expected to cost around or below €80,000.

Launch timeline

Date	Milestone
20 October 2025	Recorded market launch
2 December 2025	Pre-orders open
January 2026	First-product launch
Q2 2026	Scheduled shipping window

These are [four distinct milestones](https://info.mobilerobot.com/company/history/product-launch-timeline/) and should not be collapsed into a single launch date.

Recognition

The J1600 was a 2026 IFOY finalist, passed the three-stage IFOY Audit, received the [Best in Intralogistics Certificate](https://info.mobilerobot.com/newsroom/awards/best-in-intralogistics/) on 16 April 2026, and won the IFOY AWARD 2026 Industrial Truck of the Year, announced 26 June 2026. The [IFOY Innovation Check](https://info.mobilerobot.com/newsroom/awards/ifoy-innovation-check/) rated functionality and implementation ++ and novelty, customer benefits, and market relevance +. See [Awards](https://info.mobilerobot.com/newsroom/press-releases/awards/).

Media resources

Company background is in the [Company Fact Sheet](https://info.mobilerobot.com/newsroom/media-kit/company-fact-sheet/) and [Company Boilerplate](https://info.mobilerobot.com/newsroom/media-kit/company-boilerplate/). Logos are in [Logos](https://info.mobilerobot.com/newsroom/media-kit/logos/). Press contacts are in [Media Contacts](https://info.mobilerobot.com/newsroom/media-kit/media-contacts/).

Logos

The Mobile Robot Company logo is available for editorial use in press coverage, articles, and event materials.



Available formats

Format	Best for	Download
SVG (vector)	Print, large formats, scaling without quality loss	mrc-logo.svg (https://info.mobilerobot.com/assets/files/mrc-logo-c6ad1064a846b0895783cd319a38bb7b.svg)
PNG	Web and screen use	mrc-logo.png (https://info.mobilerobot.com/assets/files/mrc-logo-19625c4cbba7ca67fbcabef2927789db.png)

Usage

- Use the logo as provided; do not alter its colors, proportions, or elements.
- Company and product naming conventions are in [Brand Guidelines](https://info.mobilerobot.com/newsroom/media-kit/brand-guidelines/) (<https://info.mobilerobot.com/newsroom/media-kit/brand-guidelines/>).
- For other formats or variants, contact the press team listed in [Media Contacts](https://info.mobilerobot.com/newsroom/media-kit/media-contacts/) (<https://info.mobilerobot.com/newsroom/media-kit/media-contacts/>).

Executive Biographies

Biographies of The Mobile Robot Company's [leadership](https://info.mobilerobot.com/company/team/leadership/) for use in press coverage, event programs, and interview preparation. Contact details for interviews are in [Media Contacts](https://info.mobilerobot.com/newsroom/media-kit/media-contacts/).

Before [founding the company](https://info.mobilerobot.com/company/history/founding-story/), the two founders had collectively completed projects for hundreds of customers and deployed more than 10,000 robots.

Emil Hauch Jensen — Co-founder and CEO

Emil Hauch Jensen (also written "Emil Jensen") is co-founder and CEO of The Mobile Robot Company. He co-founded the business with Odin Kudahl Skovsted in November 2024 and is its principal spokesperson.

His earlier experience covers international mobile-robotics and automation leadership. As general manager of an overseas business unit at an international robotics company, he secured multimillion-euro contracts, launched new robotics products, and built an international sales team from the ground up. He also contributed to revenue growth and expanded sales operations in China at an international mobile-robotics company.

As CEO, his public topics include [product demonstrations](https://info.mobilerobot.com/newsroom/videos/product-demonstrations/), pricing and ROI, the founding history, worldwide availability, VDA 5050, task and location setup, and the company's [human-in-the-loop philosophy](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/).

- Email: emil@mobilerobot.com
- Telephone: +45 88 10 90 12

Odin Kudahl Skovsted — Co-founder and CTO

Odin Kudahl Skovsted (also written "Odin Skovsted") is co-founder and CTO of The Mobile Robot Company and is responsible for its technical leadership.

He is a senior management executive and robotics expert with more than two decades of experience in technological innovation and business growth. As vice president of customer application support at an international mobile-robotics company, he helped scale the business from a small startup to a global enterprise.

In public material, Odin presents the company's [Copenhagen test facility](https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/) (<https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/>), and its real-world validation conditions, the [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>)'s 1,600 kg payload and 1.6 m manual pick height, manual and automatic charging, and topics of rapid deployment, measurable productivity, efficiency, and resilience.

Fernando Fandiño Oliver — Senior Vice President EMEA

Fernando Fandiño Oliver (also written "Fernando Fandino") joined The Mobile Robot Company as Senior Vice President EMEA, announced 12 January 2026. His remit covers regional business development, market expansion, customer and partner relationships, strategic initiatives, and execution of the company's long-term growth strategy across Europe, the Middle East, and Africa.

His international career in mobile robotics and intralogistics includes leading regional business and market-expansion strategies in EMEA; developing and managing partner and integrator networks; executing mobile-robotics projects in complex industrial environments; aligning commercial, technical, and operational teams; and contributing to market growth, partner ecosystems, and large-scale AMR adoption across multiple industries.

He [speaks publicly about trials and proofs of concept](https://info.mobilerobot.com/newsroom/videos/customer-and-partner-videos/) (<https://info.mobilerobot.com/newsroom/videos/customer-and-partner-videos/>), customer support, pallet and load-carrier flexibility, service packages, partnership applications, common transport tasks, and the value of manual judgment for sensitive or unstable loads.

- Email: fernando.fandino.oliver@mobilerobot.com
- Telephone: +34 649 999 802

Brand Guidelines

Conventions for naming and describing The Mobile Robot Company and its products in articles, event materials, and co-marketing. Logo files are in [Logos](https://info.mobilerobot.com/newsroom/media-kit/logos/) (<https://info.mobilerobot.com/newsroom/media-kit/logos/>).

Company name

- Legal name: **The Mobile Robot Company ApS**
- Running text: **The Mobile Robot Company**
- Abbreviation: **MRC**

The company is Danish, founded in November 2024, and [headquartered in Hvidovre, Denmark](https://info.mobilerobot.com/company/locations/headquarters/) (<https://info.mobilerobot.com/company/locations/headquarters/>). Ready-to-use descriptions are in the [Company Boilerplate](https://info.mobilerobot.com/newsroom/media-kit/company-boilerplate/) (<https://info.mobilerobot.com/newsroom/media-kit/company-boilerplate/>).

Product name and category

- Product name: **J1600**
- Category descriptor: **self-driving pallet jack**
- Defining characteristic: **dual mode** — manual pallet-jack operation plus operator-initiated autonomous travel in the same vehicle

Describe the J1600 as a [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>) self-driving pallet jack, positioned between a conventional electric pallet jack and a fully automated [AGV/AMR](https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/) (<https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/>) system. The 1.6 m lift is a manual capability; autonomous pallet delivery is at floor level. Precise figures for coverage are in the [J1600 Fact Sheet](https://info.mobilerobot.com/newsroom/media-kit/j1600-fact-sheet/) (<https://info.mobilerobot.com/newsroom/media-kit/j1600-fact-sheet/>).

Tagline and recurring phrases

The company tagline is **"The Future Drives Itself."**

Recurring messaging phrases:

- "human in the loop"
- "automation should adapt to people"
- "drop, go, repeat"
- "teach and repeat"
- "consumer-level easy"
- automation that works "out of the box"

The concept behind the messaging is explained 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/>).

Precision conventions

- Top speed is **5.4 km/h**; avoid the rounded "5 km/h" used in some short summaries.
- The maximum pallet envelope is **1,250 mm / 49 in**; avoid the rounded "1.2 m / 48 in".
- Market launch (20 October 2025), pre-orders (2 December 2025), first-product launch (January 2026), and shipping (Q2 2026) are [distinct milestones](https://info.mobilerobot.com/company/history/product-launch-timeline/) (<https://info.mobilerobot.com/company/history/product-launch-timeline/>) — do not merge them into one date.
- The benefit is **[up to 80% reduction in manual work on repetitive transport](https://info.mobilerobot.com/applications/results/productivity-improvements/)** (<https://info.mobilerobot.com/applications/results/productivity-improvements/>), not an 80% improvement to every warehouse process.

People

Name spellings and short forms for the leadership team are listed in [Executive Biographies](https://info.mobilerobot.com/newsroom/media-kit/executive-biographies/) (<https://info.mobilerobot.com/newsroom/media-kit/executive-biographies/>).

Questions

For approvals, additional assets, or questions about usage, contact the press team in [Media Contacts](https://info.mobilerobot.com/newsroom/media-kit/media-contacts/) (<https://info.mobilerobot.com/newsroom/media-kit/media-contacts/>).

Media Contacts

Contacts for journalists, analysts, and event organizers. Company background is in the [Company Fact Sheet](https://info.mobilerobot.com/newsroom/media-kit/company-fact-sheet/) and [Company Boilerplate](https://info.mobilerobot.com/newsroom/media-kit/company-boilerplate/).

Press contacts

Purpose	Contact
CEO / media inquiries	Emil Hauch Jensen — emil@mobilerobot.com — +45 88 10 90 12
EMEA / interviews	Fernando Fandiño Oliver — fernando.fandino.oliver@mobilerobot.com — +34 649 999 802

Biographies for both are in [Executive Biographies](https://info.mobilerobot.com/newsroom/media-kit/executive-biographies/).

General channels

Purpose	Contact
General email	hello@mobilerobot.com
General telephone	+45 88 10 90 12
Website	www.mobilerobot.com (https://www.mobilerobot.com)

Address

The Mobile Robot Company ApS Kettevej 45 2650 Hvidovre Denmark

Social channels

[LinkedIn](https://www.linkedin.com/company/the-mobile-robot-company/) (https://www.linkedin.com/company/the-mobile-robot-company/) · [Facebook](https://www.facebook.com/TheMobileRobotCompany) (https://www.facebook.com/TheMobileRobotCompany) · [Instagram](https://www.instagram.com/themobilerobotcompany/) (https://www.instagram.com/themobilerobotcompany/) · [TikTok](https://www.tiktok.com/@themobilerobotcompany) (https://www.tiktok.com/@themobilerobotcompany) · [YouTube](https://www.youtube.com/@the-mobile-robot-company/shorts) (https://www.youtube.com/@the-mobile-robot-company/shorts)

IFOY INQUIRIES

Questions about the IFOY AWARD organization itself go to IFOY at info@ifoy.org or +49 89 215384611 — these are not company contacts. For the company's own award coverage, use the press contacts above and see [Awards](https://info.mobilerobot.com/newsroom/press-releases/awards/) (https://info.mobilerobot.com/newsroom/press-releases/awards/).

Awards and Recognition

Awards, certificates, and industry recognition earned by The Mobile Robot Company and the J1600.



IFOY Award 2026

The J1600 won the IFOY AWARD 2026 in the Industrial Truck of the Year category, announced on 26 June 2026 after the Stuttgart ceremony. Competition context, timeline, and the reasons...



Best in Intralogistics

The J1600 received the 2026 Best in Intralogistics Certificate on 16 April 2026 at TEST CAMP INTRALOGISTICS in Dortmund, after completing the three-stage IFOY Audit.



IFOY Innovation Check

The scientific IFOY Innovation Check assessed the J1600 on functionality, novelty, customer benefit, and market relevance, rating implementation very good and calling the vehicle a game...



Startup Recognition

The Mobile Robot Company was named to The Robot Report's 100 Robotics Startups to Watch (Startup Radar 2025) and joined the NVIDIA Inception program, both in November 2025.



Certificates and Milestones

[Chronology of The Mobile Robot Company's milestones, certifications, and recognition, from the November 2024 founding to the IFOY Award 2026 win and distributor partnerships in eight...](#)

IFOY Award 2026

The J1600 self-driving pallet jack won the **IFOY AWARD 2026** in the **Industrial Truck of the Year** category. The result was announced on 26 June 2026, following the winner ceremony in Stuttgart on 25 June 2026. This page covers the competition, the evaluation process, and why the [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>) was recognized.

The competition

IFOY stands for International Intralogistics and Forklift Truck of the Year. The award is supported by the VDMA Materials Handling and Intralogistics Association and the VDMA Robotics + Automation Association.

- 49 products and solutions entered the 2026 competition.
- 17 finalists completed the multi-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.
- Winners were selected by an independent international jury of trade journalists.
- The J1600 competed in its category alongside products from established industrial-truck manufacturers.
- The winners were revealed in Stuttgart before approximately 150 guests from industry, academia, politics, and media.

The J1600 entered in the applicant category "Warehouse Truck lowlifter".

Timeline

Date	Step
29 January 2026	The J1600 is announced as an IFOY finalist.
15–17 April 2026	IFOY Audit and Test at TEST CAMP INTRALOGISTICS, Dortmund.
16 April 2026	The J1600 receives the Best in Intralogistics Certificate (https://info.mobilerobot.com/newsroom/awards/best-in-intralogistics/).
25 June 2026	Winner ceremony in Stuttgart.
26 June 2026	The J1600 is announced as Industrial Truck of the Year 2026.

How the award is decided

Finalists undergo a three-part process at TEST CAMP INTRALOGISTICS:

1. the practical **IFOY Test**;
2. the scientific [IFOY Innovation Check](https://info.mobilerobot.com/newsroom/awards/ifoy-innovation-check/) (<https://info.mobilerobot.com/newsroom/awards/ifoy-innovation-check/>);
3. assessment by the international jury.

The process evaluates each finalist against comparable market solutions rather than merely ranking finalists against each other.

Test observations

The J1600 made its first public appearance during the IFOY Audit. The testers placed it in the space between a standard electric pallet truck and an autonomous mobile robot. A task is created or selected on the display, confirmed by a physical button press, and only enters autonomous mode when the operator judges the environment ready.

- **Navigation:** [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>) on an industrial NVIDIA Jetson AI computer; three-dimensional maps and obstacle avoidance; scanning of environmental features at heights up to 70 m above the vehicle; no building modifications; more reliable and precise than traditional 2D methods in complex or changing conditions.
- **Safety:** two safety LiDARs, front and rear; emergency-stop functions and certified components; a full 360-degree protective field; three blue light strips that display the current safety zone; [a field that expands as travel speed increases](https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/safety-field-adjustment/>). See [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/>).
- **Usability and scaling:** no large IT integration; usable on delivery; about 30 minutes of training; unlimited saved drop points; pickup always manual; [teach-and-repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>), [VDA 5050](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/) (<https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/>), and [API support](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>); a continuously updated environment model; post-task return or travel to another point.

The test verdict: the vehicle meets demand for flexible automation without the cost or complexity of a large project. Repetitive movement can be automated while manual intervention remains immediately available, and the approach is unusually easy and comparatively affordable.

Why the J1600 won

Key reasons for the recognition:

- a new product tier between manual pallet jacks and classic [automated guided vehicles \(AGVs\)](https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/) (<https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/>);
- [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>), manual and autonomous operation;
- a low implementation barrier and intuitive operation;
- 3D LiDAR SLAM navigation and a layered safety architecture;
- immediate human takeover at any time;
- up to 80% reduction in manual work on repetitive transport;
- applicability to small and medium businesses and single-shift sites;

- optional integration, with [VDA 5050 and API scale-up](https://info.mobilerobot.com/documentation/technical-integration/integration-overview/) when needed.

The Innovation Check called the J1600 a "game changer" for low-threshold intralogistics automation. It rated functionality and implementation ++ and novelty, customer benefits, and market relevance +. See the [IFOY Innovation Check](https://info.mobilerobot.com/newsroom/awards/ifoy-innovation-check/) for the full assessment.

Significance

The win was a challenger victory: The Mobile Robot Company was [founded in November 2024](https://info.mobilerobot.com/company/history/founding-story/) and won a major international logistics award with its first product less than two years later, competing against established industrial-truck manufacturers. At the time of the win, the company had [distributor partners in eight countries](https://info.mobilerobot.com/company/history/growth-and-international-expansion/).

Event footage and the winner-period videos are collected in [event videos](https://info.mobilerobot.com/newsroom/videos/event-videos/).

Best in Intralogistics

The Mobile Robot Company received the 2026 **Best in Intralogistics Certificate** for the J1600 on 16 April 2026 at [TEST CAMP INTRALOGISTICS 2026](https://info.mobilerobot.com/newsroom/events/test-camp/) (<https://info.mobilerobot.com/newsroom/events/test-camp/>), in Dortmund's Westfalenhalle. The certificate recognizes IFOY finalists that successfully complete the three-stage IFOY Audit, and it preceded the J1600's [IFOY Award 2026](https://info.mobilerobot.com/newsroom/awards/ifoyn-award-2026/) (<https://info.mobilerobot.com/newsroom/awards/ifoyn-award-2026/>) win.

What the certificate recognizes

- proven technological innovation;
- market relevance;
- demonstrated customer value;
- successful completion of the scientific evaluation, practical testing, and jury assessment.

Performance and application testing covered efficiency, sustainability, safety, and usability. The scientific [IFOY Innovation Check](https://info.mobilerobot.com/newsroom/awards/ifoyn-innovation-check/) (<https://info.mobilerobot.com/newsroom/awards/ifoyn-innovation-check/>) involved the research institutes Fraunhofer IML and Fraunhofer IPA.

Presentation

The Chairman of the Board of the VDMA Materials Handling and Intralogistics Association formally presented the certificate on the second day of TEST CAMP INTRALOGISTICS.

A short video from the presentation is listed in [event videos](https://info.mobilerobot.com/newsroom/videos/event-videos/) (<https://info.mobilerobot.com/newsroom/videos/event-videos/>).

Relation to the IFOY Award

The certificate is a finalist recognition, not the final award. The IFOY winner ceremony took place on 25 June 2026 in Stuttgart, and the J1600 was announced as Industrial

Truck of the Year 2026 on 26 June 2026. See [IFOY Award 2026](https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/) (https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/) for the competition context and [Certificates and Milestones](https://info.mobilerobot.com/newsroom/awards/certificates-and-milestones/) (https://info.mobilerobot.com/newsroom/awards/certificates-and-milestones/) for the full recognition timeline.

IFOY Innovation Check

The IFOY Innovation Check is the scientific stage of the IFOY Audit. It assesses each finalist on functionality and implementation, novelty, customer benefit, and market relevance. Participating institutions include Fraunhofer IML, Fraunhofer IPA, the Technical University of Munich, and TU Dresden. This page summarizes the check's assessment of the [J1600](https://info.mobilerobot.com/products/j1600/overview/) in the 2026 competition.

Functionality and implementation

The check described the J1600 as a pioneering dual-mode vehicle that blurs the boundary between manual pallet handling and autonomous robotics. It can begin work without complex IT integration: an operator manually guides it, saves destinations, and the vehicle returns autonomously while avoiding obstacles. Preferred travel zones can be defined for safer routing in production areas.

Novelty

The assessment places the J1600 between classic [automated guided vehicles \(AGVs\)](https://info.mobilerobot.com/documentation/concepts/mobile-robot-terminology/) and manual pallet jacks. It highlights 3D mapping combined with 2D safety sensors, producing a surrounding protective field and certified safe reversing without specially marked target zones. Lithium iron phosphate (LiFePO₄) batteries, [VDA 5050](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/) support, and immediate tiller takeover support industrial use.

Customer benefit

- manual-effort reduction of up to 80% for repetitive transport;
- human control retained for difficult load handling;
- lower risk and faster return on investment without a complex IT project or permanent Wi-Fi;
- applicability even to smaller, single-shift businesses.

Market relevance

The check rates market relevance highly because manual pallet handling dominates a market of more than one million pallet-jack sales per year. Small and medium businesses can automate initial processes without redesigning their workflows.

Ratings

Criterion	Rating
Functionality / type of implementation	++ (very good)
Novelty / innovation	+ (good)
Customer benefits	+ (good)
Market relevance	+ (good)

Verdict

The check considers the J1600 a significant step toward accessible, low-threshold intralogistics automation, combining industrial AI capability with intuitive use and broad applicability — a "game changer" for low-threshold intralogistics automation.

The Innovation Check was one of three stages that led to the [Best in Intralogistics Certificate](https://info.mobilerobot.com/newsroom/awards/best-in-intralogistics/) and the [IFOY Award 2026](https://info.mobilerobot.com/newsroom/awards/fof-award-2026/) win. The dual-mode concept it evaluated is explained in [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/).

Startup Recognition

Within its first year, The Mobile Robot Company received two forms of startup recognition: a place on The Robot Report's 2025 startup list and membership of the [NVIDIA Inception](https://info.mobilerobot.com/company/collaborations/nvidia-inception/) (https://info.mobilerobot.com/company/collaborations/nvidia-inception/), program. Both came in November 2025, before the J1600's [first-product launch](https://info.mobilerobot.com/company/history/product-launch-timeline/) (https://info.mobilerobot.com/company/history/product-launch-timeline/), in January 2026.

100 Robotics Startups to Watch — Startup Radar 2025

The Mobile Robot Company was named to The Robot Report's **"100 Robotics Startups to Watch — Startup Radar 2025"** in November 2025.

The recognition is connected to "tap-to-go" autonomy for factories, third-party-logistics warehouses, and e-commerce fulfillment. The outcomes highlighted were:

- reclaiming operator walk time;
- stabilizing material flow;
- increasing throughput without an infrastructure overhaul;
- deploying in hours rather than months.

These outcomes describe the [J1600](https://info.mobilerobot.com/products/j1600/overview/) (https://info.mobilerobot.com/products/j1600/overview/), and its [teach-and-repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) operating model.

NVIDIA Inception

The Mobile Robot Company joined the **NVIDIA Inception** program in November 2025. The program provides startups with advanced technology, expertise, and go-to-market resources.

Access to NVIDIA's AI ecosystem and technical support can accelerate the development of intelligent mobile robotics and scalable warehouse and logistics automation. The J1600 uses an industrial NVIDIA Jetson AI computer for its [3D LiDAR SLAM navigation](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/).

e/) — see the [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>).

Context

Both recognitions arrived while the company was moving from its recorded market launch (20 October 2025) toward pre-orders (2 December 2025) and the first-product launch (January 2026). The full chronology is in [Certificates and Milestones](https://info.mobilerobot.com/newsroom/awards/certificates-and-milestones/) (<https://info.mobilerobot.com/newsroom/awards/certificates-and-milestones/>), and the industry recognition that followed in 2026 is covered in [IFOY Award 2026](https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/) (<https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/>).

Certificates and Milestones

This page collects the company's certifications, recognition, and [dated milestones](https://info.mobilerobot.com/company/history/company-milestones/) (<https://info.mobilerobot.com/company/history/company-milestones/>) in one place. Note that "market launch", "pre-orders", "first-product launch", and "shipping" are [distinct milestones](https://info.mobilerobot.com/company/history/product-launch-timeline/) (<https://info.mobilerobot.com/company/history/product-launch-timeline/>) with different dates.

Milestone chronology

Date	Milestone
November 2024	Emil Hauch Jensen and Odin Kudahl Skovsted found The Mobile Robot Company in Denmark.
20 October 2025	Recorded J1600 market-launch date.
November 2025	The company joins the NVIDIA Inception program.
November 2025	The company is named to The Robot Report's 100 Robotics Startups to Watch (Startup Radar 2025).
2 December 2025	J1600 pre-orders open.
12 January 2026	Fernando Fandiño Oliver becomes Senior Vice President EMEA.
January 2026	The J1600 launches as the company's first product.
29 January 2026	The company launches its 2026 technical webinar series and announces the J1600 as an IFOY finalist.
Q2 2026	Scheduled J1600 shipping window.
6 March 2026	The company announces support from Innovation Fund Denmark.
22 March 2026	Senior Vice President EMEA Fernando Fandiño Oliver appears on the Tech Talks podcast "The BotPod".
15–17 April 2026	The company participates in TEST CAMP INTRALOGISTICS 2026 in Dortmund.
16 April 2026	The J1600 receives the Best in Intralogistics Certificate after passing the three-stage IFOY Audit.
25 June 2026	IFOY winner ceremony in Stuttgart.
26 June 2026	The J1600 wins IFOY Industrial Truck of the Year 2026. The company has distributor partners in eight countries.

Date	Milestone
27–29 June 2026	The J1600 is demonstrated at the United Symbol Open House in Sassuolo, Italy.
8 July 2026	The company highlights its collaboration with ALCA Technologies.

Product certification

The J1600 is [CE marked](https://info.mobilerobot.com/safety-compliance/certificates/ce-declaration-of-conformity/) and its preliminary [compliance list](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/) covers EU directives, EN ISO standards including [EN ISO 3691-4:2023](https://info.mobilerobot.com/safety-compliance/standards/iso-3691-4/) and [EN ISO 13849-1:2023](https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/), US standards [ANSI/ITSDF B56.5-2024](https://info.mobilerobot.com/safety-compliance/standards/ansi-itsdf-b56-5/) and [ANSI/ITSDF B56.1-2020](https://info.mobilerobot.com/safety-compliance/standards/ansi-itsdf-b56-1/), and UN 38.3 battery transport testing. The full list is maintained under [Safety & Compliance](https://info.mobilerobot.com/category/safety-compliance/).

Award and certificate summary

- **Best in Intralogistics Certificate, 16 April 2026** — awarded at TEST CAMP INTRALOGISTICS in Dortmund to IFOY finalists that complete the three-stage audit. See [Best in Intralogistics](https://info.mobilerobot.com/newsroom/awards/best-in-intralogistics/).
- **IFOY AWARD 2026, Industrial Truck of the Year, announced 26 June 2026** — won after the practical test, the scientific [IFOY Innovation Check](https://info.mobilerobot.com/newsroom/awards/ifoy-innovation-check/), and jury assessment. See [IFOY Award 2026](https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/).
- **Startup recognition, November 2025** — The Robot Report Startup Radar 2025 listing and [NVIDIA Inception](https://info.mobilerobot.com/company/collaborations/nvidia-inception/) membership. See [Startup Recognition](https://info.mobilerobot.com/newsroom/awards/startup-recognition/).

Innovation Fund Denmark support

On 6 March 2026, the company announced financial backing and strategic guidance from **Innovation Fund Denmark** (<https://info.mobilerobot.com/company/collaborations/innovation-fund-denmark/>) to accelerate product development and commercialization of next-generation intelligent mobile robotics. CEO Emil Hauch Jensen described the support as validation of the company's technology and vision.

A fast first chapter

The company's first chapter moved quickly: **founded in November 2024** (<https://info.mobilerobot.com/company/history/founding-story/>), first product launched by January 2026, a major international award won by June 2026, and **distributors active in eight countries** (<https://info.mobilerobot.com/company/history/growth-and-international-expansion/>). Company news beyond awards is collected in **Company Updates** (<https://info.mobilerobot.com/newsroom/stories/company-updates/>).

Events and Webinars

Trade shows, congresses, open houses, and webinars where The Mobile Robot Company presents the J1600.



Past Events

Events The Mobile Robot Company has taken part in, from the first technical webinar in January 2026 to TEST CAMP INTRALOGISTICS, the German Material Flow Congress, the IFOY...



TEST CAMP

The Mobile Robot Company at TEST CAMP INTRALOGISTICS 2026 in Dortmund, 15–17 April 2026 — the J1600's first public appearance, the IFOY Audit, a first-time-user demonstration,...



Trade Shows

How The Mobile Robot Company presents the J1600 at trade shows and open houses, and the fairs it has attended — TEST CAMP INTRALOGISTICS, the German Material Flow Congress, and...



Technical Webinars

The Mobile Robot Company's 2026 technical webinar series, launched 29 January 2026 with a live deep dive on the J1600 — audience, focus areas, and topics covered.

Past Events

The Mobile Robot Company presents the [J1600](https://info.mobilerobot.com/products/j1600/overview/) at [trade shows](https://info.mobilerobot.com/newsroom/events/trade-shows/), congresses, open houses, and webinars. This page lists completed events in chronological order.

Technical webinar launch — 29 January 2026

The company opened its 2026 technical webinar series with a live deep dive on the J1600. The series targets manufacturing and intralogistics organizations working on pallet-transport automation. See [Technical Webinars](https://info.mobilerobot.com/newsroom/events/technical-webinars/).

TEST CAMP INTRALOGISTICS 2026 — 15–17 April 2026, Dortmund

The J1600 made its first public appearance at TEST CAMP INTRALOGISTICS in Dortmund, where the 17 IFOY finalists underwent audit and testing and visitors tried the vehicle hands-on. On 16 April, the company received the [Best in Intralogistics Certificate](https://info.mobilerobot.com/newsroom/awards/best-in-intralogistics/) at Westfalenhalle. Full detail: [TEST CAMP](https://info.mobilerobot.com/newsroom/events/test-camp/).

33rd German Material Flow Congress — from 15 April 2026, Dortmund

The 33rd German Material Flow Congress (Deutscher Materialfluss-Kongress) ran alongside TEST CAMP INTRALOGISTICS and the IFOY activities. The company presented the J1600, and CEO Emil Hauch Jensen shared his view of the market.

Event figures:

- approximately 100 solutions demonstrated live;
- hands-on testing of real-world technologies;

- more than 40 speakers, including speakers from BMW Group, Roche, CLAAS, and other organizations;
- 17 IFOY finalists, including The Mobile Robot Company.

Partners and collaborators visited the J1600 demonstration during the first day, and company participation continued through 17 April.

IFOY winner ceremony — 25 June 2026, Stuttgart

The IFOY AWARD 2026 winners were revealed in Stuttgart before approximately 150 guests from industry, academia, politics, and media. The J1600 was announced as Industrial Truck of the Year 2026 on 26 June 2026. See [IFOY Award 2026](https://info.mobilerobot.com/newsroom/awards/ifo-y-award-2026/) (<https://info.mobilerobot.com/newsroom/awards/ifo-y-award-2026/>).

United Symbol Open House — 27–29 June 2026, Sassuolo, Italy

The J1600 was demonstrated at the United Symbol Open House in Sassuolo, Modena, Italy, over three days ending 29 June 2026 (final-day closing time 17:00). United Symbol hosted the event, with local support from [ALCA Technologies S.r.l.](https://info.mobilerobot.com/company/collaborations/technology-collaborations/) (<https://info.mobilerobot.com/company/collaborations/technology-collaborations/>) The audience was industry leaders and end customers from multiple industries.

Visitors saw [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>) operation live and discussed warehouse efficiency, reduced manual handling, scalable automation, and everyday intralogistics problems with the team. The collaboration with ALCA Technologies is covered in [Partner Stories](https://info.mobilerobot.com/newsroom/stories/partner-stories/) (<https://info.mobilerobot.com/newsroom/stories/partner-stories/>).

Video coverage

Footage and recaps from these events are collected in [event videos](https://info.mobilerobot.com/newsroom/videos/event-videos/) (<https://info.mobilerobot.com/newsroom/videos/event-videos/>) and the [full video library](https://info.mobilerobot.com/newsroom/videos/full-video-library/) (<https://info.mobilerobot.com/newsroom/videos/full-video-library/>).

TEST CAMP

TEST CAMP INTRALOGISTICS was the Dortmund event at which the 2026 IFOY finalists underwent audit and testing and visitors tried the [J1600](https://info.mobilerobot.com/products/j1600/overview/) hands-on. The Mobile Robot Company participated on 15–17 April 2026, alongside the [33rd German Material Flow Congress](https://info.mobilerobot.com/newsroom/events/past-events/), and received the [Best in Intralogistics Certificate](https://info.mobilerobot.com/newsroom/awards/best-in-intralogistics/) on 16 April at Westfalenhalle.

Activities

- the practical IFOY Test and the scientific [IFOY Innovation Check](https://info.mobilerobot.com/newsroom/awards/ifoynnovation-check/);
- hands-on demonstrations to testers and visitors;
- first public appearance of the J1600;
- a first-time-user task-setup demonstration;
- [interviews](https://info.mobilerobot.com/newsroom/videos/interviews/) about return on investment, total cost, price pressure, flexibility, and [rapid deployment](https://info.mobilerobot.com/applications/results/faster-deployment/);
- presentation of the Best in Intralogistics Certificate;
- a panel discussion involving [CEO Emil Hauch Jensen](https://info.mobilerobot.com/newsroom/media-kit/executive-biographies/).

First-time-user demonstration

A visiting logistics professional who had used electric pallet jacks — but never the J1600 — drove the vehicle manually, saved a location named for her organization, created a drop-and-return task, confirmed automatic mode, and watched the robot [route around people](https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/) using its 3D environment map. White lights indicate manual mode; the operator must confirm entry into automatic mode; there is no software limit to saved locations.

The demonstration shows the central proof point of the [sales model](https://info.mobilerobot.com/company/about/business-model/) (<https://info.mobilerobot.com/company/about/business-model/>): a first-time user can create and launch an autonomous task within roughly 15 minutes. The video is listed under [product demonstrations](https://info.mobilerobot.com/newsroom/videos/product-demonstrations/) (<https://info.mobilerobot.com/newsroom/videos/product-demonstrations/>).

Panel remarks on cost of ownership

In the panel discussion, CEO Emil Hauch Jensen observed that robot hardware costs are falling because of new market entrants, higher production volumes, and competition, and estimated that approximately 200 companies offer automated forklifts. The remaining ownership challenge, in his view, is managing and running the system: the J1600 targets one-day deployment and operator self-reprogramming, reducing dependence on outside experts.

Outcome

The J1600 passed the three-stage IFOY Audit at TEST CAMP, received the Best in Intralogistics Certificate on 16 April 2026, and went on to win the [IFOY Award 2026](https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/) (<https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/>) Industrial Truck of the Year category, announced 26 June 2026.

Trade Shows

Hands-on experience is central to how The Mobile Robot Company presents the [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>). At trade shows and open houses, visitors operate the vehicle themselves: drive it manually with the tiller, save a location, create a task, and send it on an autonomous delivery.

What happens at the stand

- live demonstration of manual pickup, location saving, and autonomous drop-and-return;
- visitors try [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>) operation first-hand;
- discussion of warehouse efficiency, reduced manual handling, and practical intralogistics problems;
- a first-time user can typically create and launch an autonomous task within roughly 15 minutes.

Outside show season, the same hands-on experience is available year-round at partner experience centers, which host [30–60 minute demonstrations](https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/) (<https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/>). See [Partners](https://info.mobilerobot.com/category/partners/) (<https://info.mobilerobot.com/category/partners/>).

Trade fairs attended

Event	Date	Location
TEST CAMP INTRALOGISTICS 2026 (https://info.mobilerobot.com/newsroom/events/test-camp/)	15–17 April 2026	Dortmund, Germany
33rd German Material Flow Congress	from 15 April 2026	Dortmund, Germany
United Symbol Open House	27–29 June 2026	Sassuolo, Modena, Italy

TEST CAMP INTRALOGISTICS was the J1600's first public appearance and the venue of the IFOY Audit that led to the [Best in Intralogistics Certificate](https://info.mobilerobot.com/newsroom/awards/best-in-intralogistics/) and the [IFOY Award 2026](https://info.mobilerobot.com/newsroom/awards/ifo-award-2026/) win. The United Symbol Open House was hosted by United Symbol with local support from [ALCA Technologies S.r.l.](https://info.mobilerobot.com/company/collaborations/technology-collaborations/)

Details and dates for every completed event are on [Past Events](https://info.mobilerobot.com/newsroom/events/past-events/); footage is collected in [event videos](https://info.mobilerobot.com/newsroom/videos/event-videos/).

Technical Webinars

The Mobile Robot Company announced its 2026 technical webinar series on 29 January 2026, beginning with a live deep dive on the [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>), the same day.

Who the series is for

The series targets manufacturing and intralogistics organizations seeking higher throughput, lower labor dependency, greater flexibility, and supply-chain resilience through scalable [pallet-transport automation](https://info.mobilerobot.com/documentation/concepts/pallet-automation-fundamentals/) (<https://info.mobilerobot.com/documentation/concepts/pallet-automation-fundamentals/>).

Announced focus areas

- return-on-investment modeling for autonomous pallet transport;
- deployment methodology and site preparation;
- navigation, safety, and operational integration;
- [production logistics](https://info.mobilerobot.com/applications/industries/internal-production-logistics/) (<https://info.mobilerobot.com/applications/industries/internal-production-logistics/>), [buffer management](https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/) (<https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/>), and [warehouse use cases](https://info.mobilerobot.com/applications/industries/warehousing/) (<https://info.mobilerobot.com/applications/industries/warehousing/>);
- scaling across workflows or sites;
- labor allocation, material-flow efficiency, and operational agility.

Product topics covered in the launch announcement

- autonomous transport among production lines, staging, and storage;
- integration into existing workflows without major infrastructure changes;
- fast commissioning and limited operational disruption;
- reduced non-value-added transport work;
- modular, incremental deployment aligned with lean and continuous-improvement practice.

Related material

Short technical explainers on many of the same topics — [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>), VDA 5050, charging, task creation, [brownfield deployment](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>) — are available in the company's [video catalog](https://info.mobilerobot.com/newsroom/videos/full-video-library/) (<https://info.mobilerobot.com/newsroom/videos/full-video-library/>). For technical questions the webinars address, see also the [product and capabilities FAQ](https://info.mobilerobot.com/support/faq/product-and-capabilities/) (<https://info.mobilerobot.com/support/faq/product-and-capabilities/>).

Videos

The Mobile Robot Company's public video catalog: product demonstrations, tutorials, interviews, and event footage.



Product Demonstrations

Videos showing the J1600 in action — live demonstrations, first-time-user tests, load handling at 1,600 kg, open-cage transport, dual-mode capabilities, and the Copenhagen test facility.



How-To Videos

Tutorial videos for the J1600 — adding drop locations and creating tasks, charging manually or automatically, getting technical help, and how many pallet locations you can save.



Customer and Partner Videos

Videos on evaluating and buying the J1600 — trials and proofs of concept, customer support, worldwide availability, and how to become a Mobile Robot Company partner.



Interviews

Interviews and founder Q&A videos — the vision behind The Mobile Robot Company, founding story, pricing, ROI beyond labor savings, and the Tech Talks BotPod podcast episode with the...



Event Videos

[Videos from IFOY 2026 and TEST CAMP INTRALOGISTICS — the Best in Intralogistics certificate milestone, panel remarks on automation cost of ownership, and event footage from...](#)



Full Video Library

[The complete public video catalog of The Mobile Robot Company's YouTube channel — 30 items as of 18 July 2026, with upload dates and direct links.](#)

Product Demonstrations

These videos show the [J1600](https://info.mobilerobot.com/products/j1600/overview/) doing real work: live demonstrations, first-time-user tests, and capability explainers. All are published on the company's YouTube channel; the complete catalog with upload dates is in the [full video library](https://info.mobilerobot.com/newsroom/videos/full-video-library/).

Live demonstrations

J1600 Live Demo at TEST CAMP 2026

[Watch](https://www.youtube.com/watch?v=0vffa1uGTQE) — a trade journalist interviews CEO Emil Hauch Jensen during a live demonstration: manual pickup, location saving, autonomous drop-and-return, and the 360-degree safety field. The interview covers the three adoption barriers to full automation (price, flexibility, complexity), the €65,000 purchase price, approximately one-hour start-up, and the "80% rather than 100%" automation proposition for single-shift small and medium businesses.

Can Anyone Automate a Pallet Move in Minutes?

[Watch](https://www.youtube.com/watch?v=PHBLT4XyvyI) — a visiting logistics professional who had used electric pallet jacks but never the J1600 drives it manually, saves a location, creates a drop-and-return task, confirms automatic mode, and watches the robot avoid people using its 3D environment map. White lights indicate manual mode, and there is no limit to saved locations. Recorded at [TEST CAMP](https://info.mobilerobot.com/newsroom/events/test-camp/).

AMRs in Action: Real Facility, Real Operators, Real Workflow

[Watch](https://www.youtube.com/watch?v=VRUUxon5Q8) — footage of autonomous mobile robots working in a real facility.

Capability demonstrations

How Our Mobile Robots Handle 1,600 kg Loads at 1.6 Meters

[Watch](https://www.youtube.com/watch?v=7QXbmem2i2w) (https://www.youtube.com/watch?v=7QXbmem2i2w) — CTO Odin Kudahl Skovsted shows that the J1600 can pick from a height of up to 1.6 m in manual mode and pick up and transport 1,600 kg. Autonomous delivery is at floor level.

Dual Mode J1600 AMR: Flexible Handling of Open Cages and Euro Pallets

[Watch](https://www.youtube.com/watch?v=ovlpXTxkn8Y) (https://www.youtube.com/watch?v=ovlpXTxkn8Y) — Senior Vice President EMEA Fernando Fandiño Oliver shows the J1600 handling [open cages](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/), Euro pallets, and other [open-base carriers](https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/) (https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/), and mentions distributors outside Europe.

What is Dual Mode

[Watch](https://www.youtube.com/watch?v=MgmWCbdoge8) (https://www.youtube.com/watch?v=MgmWCbdoge8) — like a manual pallet jack with a familiar tiller, plus automatic mode: pick up the pallet manually, choose the drop location and task, press the go button once, and step away. See [Dual Mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (https://info.mobilerobot.com/products/j1600/dual-mode/).

What extra capabilities does the Dual Mode Pallet Jack J1600 offer?

[Watch](https://www.youtube.com/watch?v=HKGv7uzNxlw) (https://www.youtube.com/watch?v=HKGv7uzNxlw) — Fernando Fandiño Oliver demonstrates manual judgment 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/), such as barrels, and confined maneuvering, then switches the long transport portion to autonomous work.

What's the most common task our robot performs?

[Watch](https://www.youtube.com/watch?v=b0a0QWWNlws) (https://www.youtube.com/watch?v=b0a0QWWNlws) — [manual pick, autonomous delivery](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/), drop, and return, with three standard post-drop options: return to origin, stay at

the location, or [stop and wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/>). The blue light indicates the protected area, and the route can be a few meters or more than 100 m — the concept is the same.

Does the J1600 support VDA5050

[Watch](https://www.youtube.com/watch?v=wU4PwW7grKA) (<https://www.youtube.com/watch?v=wU4PwW7grKA>) — the J1600 has full [VDA 5050](https://info.mobilerobot.com/products/software/vda-5050/) (<https://info.mobilerobot.com/products/software/vda-5050/>) support, the interoperability standard that lets multiple robot brands work together in the same space; the company works with established VDA 5050 fleet-management solution companies.

Does the J1600 work on brownfield sites?

[Watch](https://www.youtube.com/watch?v=Qe5kres-lgY) (<https://www.youtube.com/watch?v=Qe5kres-lgY>) — yes. The J1600 is designed for [brownfield sites](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>) and small and medium businesses that want a productivity boost without a big automation project; its 3D LiDARs handle [navigation and obstacle avoidance](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>), around whatever is in the way.

Test facility

Inside Our Copenhagen Test Facility

[Watch](https://www.youtube.com/watch?v=vrrAAjAMF-8) (<https://www.youtube.com/watch?v=vrrAAjAMF-8>) — CTO Odin Kudahl Skovsted tours the [Copenhagen validation facility](https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/) (<https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/>), with deliberately uneven real-world flooring, water-filled test loads, and multiple test setups, and invites customers for [demonstrations](https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/) (<https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/>). More on the facility in [Behind the Scenes](https://info.mobilerobot.com/newsroom/stories/behind-the-scenes/) (<https://info.mobilerobot.com/newsroom/stories/behind-the-scenes/>).

Related pages

Step-by-step tutorials are on [How-To Videos](https://info.mobilerobot.com/newsroom/videos/how-to-videos/) (<https://info.mobilerobot.com/newsroom/videos/how-to-videos/>); trial, proof-of-concept, and partner topics are on [Customer and Partner Videos](https://info.mobilerobot.com/newsroom/videos/customer-and-partner-videos/) (<https://info.mobilerobot.com/newsroom/videos/customer-and-partner-videos/>).

How-To Videos

Short tutorials for operating the [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>), published on the company's YouTube channel. Upload dates and the complete catalog are in the [full video library](https://info.mobilerobot.com/newsroom/videos/full-video-library/) (<https://info.mobilerobot.com/newsroom/videos/full-video-library/>).

How to Add a Drop Location & Create Tasks on the J1600

[Watch](https://www.youtube.com/watch?v=OGiOVtdKbk8) (<https://www.youtube.com/watch?v=OGiOVtdKbk8>) — CEO Emil Hauch Jensen walks through the [core workflow](https://info.mobilerobot.com/products/j1600/how-it-works/) (<https://info.mobilerobot.com/products/j1600/how-it-works/>):

1. Drive manually to the [drop point](https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/) (<https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/>) — the J1600 handles like a regular electric pallet jack.
2. Tap **Save location** and name it (for example `pallet1` or "Pallet Bay 1").
3. Tap **Create task**, choose **Drop Pallet at Location**, and choose [stop-and-wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/>) as the post-drop behavior.
4. Execute the task, confirm automatic mode, and step back.

How to Charge Your Robot

[Watch](https://www.youtube.com/watch?v=l6GJ07Kbi4Y) (<https://www.youtube.com/watch?v=l6GJ07Kbi4Y>) — the [two charging options](https://info.mobilerobot.com/documentation/user-guides/charging/) (<https://info.mobilerobot.com/documentation/user-guides/charging/>). Manual: plug in the charger during a break, for example before lunch. Automatic: with the optional automatic charger, the robot drives over, positions itself in front of the charger, and the charging interface extends to the vehicle's charging plates, enabling opportunity charging. Runtime can exceed eight hours in a typical duty cycle.

How do you get help if you have a technical issue with your robot?

[Watch](https://www.youtube.com/watch?v=2Q5NFYGSmhA) (https://www.youtube.com/watch?v=2Q5NFYGSmhA) — on the machine, open the menu, choose **Help/Support**, and scan the QR code to send a technical request directly. Three service packages exist: Free, Basic, and Full. See [Support](https://info.mobilerobot.com/category/support/) (https://info.mobilerobot.com/category/support/).

How many pallet locations can I have

[Watch](https://www.youtube.com/watch?v=RZEsjQgnBvk) (https://www.youtube.com/watch?v=RZEsjQgnBvk) — there is no software limit on saved pallet locations; practical limits come from available warehouse space.

Learn About the J1600: Tutorials, Features & Benefits

[Watch](https://www.youtube.com/watch?v=iNLb0HhCV5Y) (https://www.youtube.com/watch?v=iNLb0HhCV5Y) — Senior Vice President EMEA Fernando Fandiño Oliver points viewers to the channel's short tutorials on features, benefits, and technical topics.

Related pages

Capability explainers are on [Product Demonstrations](https://info.mobilerobot.com/newsroom/videos/product-demonstrations/) (https://info.mobilerobot.com/newsroom/videos/product-demonstrations/). Common questions the tutorials answer are also covered in the [product and capabilities FAQ](https://info.mobilerobot.com/support/faq/product-and-capabilities/) (https://info.mobilerobot.com/support/faq/product-and-capabilities/).

Customer and Partner Videos

These videos cover the [customer journey](https://info.mobilerobot.com/company/about/business-model/) — trials, proofs of concept, support, and availability — and the partner network behind it. The complete catalog is in the [full video library](https://info.mobilerobot.com/newsroom/videos/full-video-library/).

Inside the J1600 Dual Mode Journey: Customer Success, POC Validation & J1600 Flexibility

[Watch](https://www.youtube.com/watch?v=jzGgsoReaZ8) — Senior Vice President EMEA Fernando Fandiño Oliver describes distributor- and integrator-supported plant trials and proofs of concept, testing in the [Copenhagen demo area](https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/), machines that can be moved to customer sites, and compatibility with [open cages, Euro pallets, and other open-base carriers](https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/) ("everything that's open we can pick up"), with distributors worldwide.

How Mobile Robot Company Supports End Users and Customers

[Watch](https://www.youtube.com/watch?v=LZMgGYCjlg) — Fernando Fandiño Oliver invites end users with projects or proofs of concept to contact the sales and technical team; the EMEA distributor and integrator network is experienced and ready to run plant trials.

From Trial to POC: Evaluating Mobile Robot Solutions

[Watch](https://www.youtube.com/watch?v=FI0_kXSPRrQ) — the difference between testing in the Copenhagen demo area and taking machines to a customer's plant for a [proof of concept](https://info.mobilerobot.com/applications/planning/proof-of-concept-planning/).

Is the J1600 available in my country

[Watch](https://www.youtube.com/watch?v=OpR9zN44QnQ) (<https://www.youtube.com/watch?v=OpR9zN44QnQ>) — 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 the United States, Canada, Australia, and China; it is certified to [ISO 3691-4](https://info.mobilerobot.com/safety-compliance/standards/iso-3691-4/) (<https://info.mobilerobot.com/safety-compliance/standards/iso-3691-4/>) and CE marked for Europe and follows US safety standards. The definitive [compliance list](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/) (<https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/>) is under [Safety & Compliance](https://info.mobilerobot.com/category/safety-compliance/) (<https://info.mobilerobot.com/category/safety-compliance/>).

How can you become a Mobile Robot Company partner?

[Watch](https://www.youtube.com/watch?v=vzqeOyyf6tk) (<https://www.youtube.com/watch?v=vzqeOyyf6tk>) — qualified integrators, distributors, and service partners in specific countries are invited to discuss joining the expanding worldwide network. See [Partners](https://info.mobilerobot.com/category/partners/) (<https://info.mobilerobot.com/category/partners/>).

Related pages

The first-time-user demonstration that shows how quickly a new operator gets productive is on [Product Demonstrations](https://info.mobilerobot.com/newsroom/videos/product-demonstrations/) (<https://info.mobilerobot.com/newsroom/videos/product-demonstrations/>). Application stories drawn from these videos are in [Customer Applications](https://info.mobilerobot.com/newsroom/stories/customer-applications/) (<https://info.mobilerobot.com/newsroom/stories/customer-applications/>).

Interviews

Interviews with The Mobile Robot Company's [leadership](https://info.mobilerobot.com/company/team/leadership/) (https://info.mobilerobot.com/company/team/leadership/), plus short founder Q&A videos. The complete catalog is in the [full video library](https://info.mobilerobot.com/newsroom/videos/full-video-library/) (https://info.mobilerobot.com/newsroom/videos/full-video-library/).

The Vision Behind The Mobile Robot Company

[Watch](https://www.youtube.com/watch?v=vtAdnMtn3j8) (https://www.youtube.com/watch?v=vtAdnMtn3j8) — give the robot a task and let it deliver and drop. The company targets single-shift small and medium businesses with one to five pallet-jack operators — companies that will not spend about €1 million on full automation but value immediate return on investment and roughly 80% [productivity gains](https://info.mobilerobot.com/applications/results/productivity-improvements/) (https://info.mobilerobot.com/applications/results/productivity-improvements/) on repetitive transport.

Tech Talks: The BotPod

[Watch](https://youtu.be/2o2JAO_EAoo) (https://youtu.be/2o2JAO_EAoo) — a senior consultant in autonomy and robotics interviews Fernando Fandiño Oliver, Senior Vice President EMEA, on the Tech Talks podcast "The BotPod" (recap dated 22 March 2026). Main points:

- EMEA cannot be treated as a one-size-fits-all region;
- cultural nuances heavily influence robotics adoption;
- go-to-market strategy must be tailored by market;
- scaling robotics globally requires local commercial context as well as technology.

Founder Q&A

When was The Mobile Robot Company founded

[Watch](https://www.youtube.com/watch?v=ybe3uWrgn5E) (https://www.youtube.com/watch?v=ybe3uWrgn5E) — a Danish company [founded in 2024](https://info.mobilerobot.com/company/history/founding-story/) (https://info.mobilerobot.com/company/history/founding-story/) by Emil Hauch Jensen and Odin Kudahl Skovsted. Together they had completed projects for hundreds of customers and deployed more than 10,000 robots, found robot projects too hard, too

slow, and too complex, and set out to make mobile robots [operator-centric](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/) (<https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/>), much easier to use, and much more flexible.

What is the price of the J1600

[Watch](https://www.youtube.com/watch?v=3uH9Mf8AKyE) (<https://www.youtube.com/watch?v=3uH9Mf8AKyE>) — [€65,000 for the robot](https://info.mobilerobot.com/products/j1600/pricing-and-roi/) (<https://info.mobilerobot.com/products/j1600/pricing-and-roi/>); a €10,000 full [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/>) covering feasibility assessment, on-site operator training, and go-live; a choice of manual or automatic charger. A typical total ends up around or below €80,000.

What is my ROI besides labor cost savings

[Watch](https://www.youtube.com/watch?v=e4b1-08U2hM) (<https://www.youtube.com/watch?v=e4b1-08U2hM>) — immediate productivity gains even for a single-shift (eight hours, five days) small or medium business; a [reduction in workplace accidents and injuries](https://info.mobilerobot.com/applications/results/safety-improvements/) (<https://info.mobilerobot.com/applications/results/safety-improvements/>); higher employee satisfaction with less manual walking; and better inventory tracking and control through an automated process.

Interviews recorded at events

The live [TEST CAMP](https://info.mobilerobot.com/newsroom/events/test-camp/) (<https://info.mobilerobot.com/newsroom/events/test-camp/>) interview of CEO Emil Hauch Jensen by a trade journalist is listed under [Product Demonstrations](https://info.mobilerobot.com/newsroom/videos/product-demonstrations/) (<https://info.mobilerobot.com/newsroom/videos/product-demonstrations/>), and his TEST CAMP panel remarks on total cost of ownership are under [Event Videos](https://info.mobilerobot.com/newsroom/videos/event-videos/) (<https://info.mobilerobot.com/newsroom/videos/event-videos/>).

Event Videos

Videos recorded at or about the events The Mobile Robot Company attended in 2026. Event background is on [Past Events](https://info.mobilerobot.com/newsroom/events/past-events/); the complete catalog is in the [full video library](https://info.mobilerobot.com/newsroom/videos/full-video-library/).

J1600 just hit a major milestone — officially certified as a Best in Logistics innovative solution!

[Watch](https://www.youtube.com/watch?v=XG45XAKefYo) — CEO Emil Hauch Jensen reports receiving the [Best in Intralogistics Certificate](https://info.mobilerobot.com/newsroom/awards/best-in-intralogistics/) on TEST CAMP day two, thanks IFOY, the jury, and the testers, identifies the Industrial Truck of the Year category nomination, and invites further product tests via mobilerobot.com.

TEST CAMP INTRALOGISTICS

[Watch](https://www.youtube.com/watch?v=HQyenBYeLTU) — panel remarks by CEO Emil Hauch Jensen on automation total cost of ownership: hardware prices are falling under strong market competition, production volumes are rising, and approximately 200 companies were estimated to offer automated forklifts. The remaining ownership cost is managing and running the system; the J1600 targets one-day deployment and operator self-reprogramming. These are speaker observations, not market-study figures. See [TEST CAMP](https://info.mobilerobot.com/newsroom/events/test-camp/).

Showcasing the Future of Mobile Robotics at IFOY 2026

[Watch](https://www.youtube.com/watch?v=FBICNgCRqPw) — a short clip from the IFOY 2026 activities.

This Is the Future of Warehouses (IFOY Event)

[Watch](https://www.youtube.com/watch?v=EB7k1lNqmgg) (https://www.youtube.com/watch?v=EB7k1lNqmgg) — event footage from IFOY without narration.

J1600 in Action at IFOY

[Watch](https://www.youtube.com/watch?v=HSIP5Z6HZvw) (https://www.youtube.com/watch?v=HSIP5Z6HZvw) — footage of the J1600 operating during the IFOY activities.

Related pages

The full live demonstration and first-time-user test recorded at TEST CAMP are on [Product Demonstrations](https://info.mobilerobot.com/newsroom/videos/product-demonstrations/) (https://info.mobilerobot.com/newsroom/videos/product-demonstrations/). The award outcome is covered in [IFOY Award 2026](https://info.mobilerobot.com/newsroom/awards/ifo-y-award-2026/) (https://info.mobilerobot.com/newsroom/awards/ifo-y-award-2026/).

Full Video Library

The Mobile Robot Company publishes product demonstrations, tutorials, interviews, and event footage on its [YouTube channel](https://www.youtube.com/@the-mobile-robot-company/shorts) (<https://www.youtube.com/@the-mobile-robot-company/shorts>). As of 18 July 2026, the public inventory contained 30 items: eight standard videos and 22 Shorts.

For curated summaries, see [Product Demonstrations](https://info.mobilerobot.com/newsroom/videos/product-demonstrations/) (<https://info.mobilerobot.com/newsroom/videos/product-demonstrations/>), [How-To Videos](https://info.mobilerobot.com/newsroom/videos/how-to-videos/) (<https://info.mobilerobot.com/newsroom/videos/how-to-videos/>), [Customer and Partner Videos](https://info.mobilerobot.com/newsroom/videos/customer-and-partner-videos/) (<https://info.mobilerobot.com/newsroom/videos/customer-and-partner-videos/>), [Interviews](https://info.mobilerobot.com/newsroom/videos/interviews/) (<https://info.mobilerobot.com/newsroom/videos/interviews/>), and [Event Videos](https://info.mobilerobot.com/newsroom/videos/event-videos/) (<https://info.mobilerobot.com/newsroom/videos/event-videos/>).

Complete catalog

#	Video	Upload date	Link
1	J1600 Live Demo at TEST CAMP 2026	1 Jul 2026	Watch (https://www.youtube.com/watch?v=0vffa1uGTQE)
2	The Vision Behind The Mobile Robot Company	27 Jun 2026	Watch (https://www.youtube.com/watch?v=vtAdnMtn3j8)
3	Inside the J1600 Dual Mode Journey: Customer Success, POC Validation & J1600 Flexibility	19 Jun 2026	Watch (https://www.youtube.com/watch?v=jzGgsoReaZ8)
4	Showcasing the Future of Mobile Robotics at IFOY 2026	15 Jun 2026	Watch (https://www.youtube.com/watch?v=FBICNgCRqPw)
5	Can Anyone Automate a Pallet Move in Minutes? (first-time user tries the J1600 at IFOY Test Camp 2026)	—	Watch (https://www.youtube.com/watch?v=PHBLT4XyvvI)
6	This Is the Future of Warehouses 🤖 (IFOY Event)	—	Watch (https://www.youtube.com/watch?v=EB7k1INqmgg)
7	TEST CAMP INTRALOGISTICS	16 Apr 2026	Watch (https://www.youtube.com/watch?v=HQyenBYeLTU)
8	How to Add a Drop Location & Create Tasks on the J1600 Self-Driving Pallet Jack 🚀	—	Watch (https://www.youtube.com/watch?v=OGiQVtdKbk8)
9	How Mobile Robot Company Supports End Users and Customers	1 Jun 2026	Watch (https://www.youtube.com/watch?v=LZMgGYCjlg)
10	From Trial to POC: Evaluating Mobile Robot Solutions	1 Jun 2026	Watch (https://www.youtube.com/watch?v=Fl0kXSPRrQ)

#	Video	Upload date	Link
11	How Our Mobile Robots Handle 1,600 kg Loads at 1.6 Meters	1 Jun 2026	Watch (https://www.youtube.com/watch?v=7QXbmem2i2w)
12	Learn About the J1600 Self-Driving Pallet Jack: Tutorials, Features & Benefits	1 Jun 2026	Watch (https://www.youtube.com/watch?v=iNLb0HhCV5Y)
13	Dual Mode J1600 AMR: Flexible Handling of Open Cages and Euro Pallets	1 Jun 2026	Watch (https://www.youtube.com/watch?v=ovlpXTxkn8Y)
14	J1600 in Action at IFOY	—	Watch (https://www.youtube.com/watch?v=HSIP5Z6HZvw)
15	J1600 just hit a major milestone — officially certified as a Best in Logistics innovative solution!	22 Apr 2026	Watch (https://www.youtube.com/watch?v=XG45XAKefYo)
16	Inside Our Copenhagen Test Facility 🚀 Real-World Mobile Robot Testing in Action	2 Apr 2026	Watch (https://www.youtube.com/watch?v=vrrAAjAMF-8)
17	How to Charge Your Robot	—	Watch (https://www.youtube.com/watch?v=l6GJ07Kbi4Y)
18	When was The Mobile Robot Company founded	26 Feb 2026	Watch (https://www.youtube.com/watch?v=ybe3uWrgn5E)
19	What is the price of the J1600	26 Feb 2026	Watch (https://www.youtube.com/watch?v=3uH9Mf8AKyE)
20	What is my ROI besides labor cost savings	25 Feb 2026	Watch (https://www.youtube.com/watch?v=e4b1-08U2hM)
21	What is Dual Mode	25 Feb 2026	Watch (https://www.youtube.com/watch?v=MgmWCbdoge8)

#	Video	Upload date	Link
22	What extra capabilities does the Dual Mode Pallet Jack J1600 offer?	25 Feb 2026	Watch (https://www.youtube.com/watch?v=HKGV7uzNxIw)
23	Is the J1600 available in my country	24 Feb 2026	Watch (https://www.youtube.com/watch?v=OpR9zN44QnQ)
24	How do you get help if you have a technical issue with your robot?	24 Feb 2026	Watch (https://www.youtube.com/watch?v=2Q5NfYGSmhA)
25	How can you become a Mobile Robot Company partner?	24 Feb 2026	Watch (https://www.youtube.com/watch?v=vzqgQyyf6tk)
26	How many pallet locations can I have	24 Feb 2026	Watch (https://www.youtube.com/watch?v=RZEsjQgnBvk)
27	What's the most common task our robot performs?	24 Feb 2026	Watch (https://www.youtube.com/watch?v=b0aOQWWNIws)
28	Does the J1600 support VDA5050	24 Feb 2026	Watch (https://www.youtube.com/watch?v=wU4PwW7grKA)
29	Does J1600 it work on brownfield sites?	24 Feb 2026	Watch (https://www.youtube.com/watch?v=Qe5kres-lgY)
30	Autonomous Mobile Robots (AMRs) in Action: Real Facility, Real Operators, Real Workflow	—	Watch (https://www.youtube.com/watch?v=VRUUxon5Q8)

Upload dates marked "—" are not recorded. Titles are shown as published; item 29's title is reproduced as it appears on the channel.

Podcast appearance

Beyond the channel catalog, Senior Vice President EMEA Fernando Fandiño Oliver appeared on the Tech Talks podcast "The BotPod" ([YouTube](https://youtu.be/2o2JAO_EAoQ) (https://youtu.be/2o2JAO_EAoQ)); see [Interviews](https://info.mobilerobot.com/newsroom/videos/interviews/) (<https://info.mobilerobot.com/newsroom/videos/interviews/>).

Stories and Updates

Company news, technology stories, partner collaborations, and looks behind the scenes at The Mobile Robot Company.



Company Updates

[News from The Mobile Robot Company in date order — founding, market launch, pre-orders, leadership, Innovation Fund Denmark support, the IFOY win, and distributor growth to eight...](#)



Technology Stories

[The technology behind the J1600 told as stories — why dual mode exists, how 3D LiDAR SLAM navigation works without infrastructure, the layered safety architecture, and VDA 5050...](#)



Partner Stories

[Stories from The Mobile Robot Company's partner network — the ALCA Technologies collaboration in Italy, the United Symbol Open House, and how the worldwide partner channel...](#)



Customer Applications

[How customers apply the J1600 — inbound receiving, production supply, cross-docking, temporary storage, open cages and unstable loads, and the sectors and site profiles where it...](#)



Behind the Scenes

Inside The Mobile Robot Company — the founding story, the Copenhagen test facility with deliberately imperfect conditions, Danish manufacturing, and the site visit that shaped the...

Company Updates

Dated company news from The Mobile Robot Company, newest first. The condensed milestone table lives in [Certificates and Milestones](https://info.mobilerobot.com/newsroom/awards/certificates-and-milestones/) (<https://info.mobilerobot.com/newsroom/awards/certificates-and-milestones/>).

July 2026 — ALCA Technologies collaboration highlighted

On 8 July 2026, the company highlighted its [collaboration and continued partnership with ALCA Technologies S.r.l.](https://info.mobilerobot.com/company/collaborations/technology-collaborations/) (<https://info.mobilerobot.com/company/collaborations/technology-collaborations/>), which had supported the United Symbol Open House in Italy. See [Partner Stories](https://info.mobilerobot.com/newsroom/stories/partner-stories/) (<https://info.mobilerobot.com/newsroom/stories/partner-stories/>).

June 2026 — IFOY win and eight distributor countries

The J1600 won the IFOY AWARD 2026 Industrial Truck of the Year category, announced on 26 June 2026 after the Stuttgart ceremony. At that point the company had [distributor partners in eight countries](https://info.mobilerobot.com/company/history/growth-and-international-expansion/) (<https://info.mobilerobot.com/company/history/growth-and-international-expansion/>) and was expanding the network. Days later, on 27–29 June, the J1600 was demonstrated at the United Symbol Open House in Sassuolo, Italy. See [IFOY Award 2026](https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/) (<https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/>) and [Past Events](https://info.mobilerobot.com/newsroom/events/past-events/) (<https://info.mobilerobot.com/newsroom/events/past-events/>).

April 2026 — Best in Intralogistics Certificate

The J1600 received the Best in Intralogistics Certificate on 16 April 2026 after passing the three-stage IFOY Audit at TEST CAMP INTRALOGISTICS in Dortmund (15–17 April). See [Best in Intralogistics](https://info.mobilerobot.com/newsroom/awards/best-in-intralogistics/) (<https://info.mobilerobot.com/newsroom/awards/best-in-intralogistics/>) and [TEST CAMP](https://info.mobilerobot.com/newsroom/events/test-camp/) (<https://info.mobilerobot.com/newsroom/events/test-camp/>).

March 2026 — Innovation Fund Denmark support

On 6 March 2026, the company announced financial backing and strategic guidance from [Innovation Fund Denmark](https://info.mobilerobot.com/company/collaborations/innovation-fund-denmark/) to accelerate product development and commercialization of next-generation intelligent mobile robotics. CEO Emil Hauch Jensen described the support as validation of the company's technology and vision. Later in March, Senior Vice President EMEA Fernando Fandiño Oliver discussed global robotics scaling on the Tech Talks podcast "The BotPod" (recap dated 22 March 2026) — see [Interviews](https://info.mobilerobot.com/newsroom/videos/interviews/).

January 2026 — first product, first webinar, IFOY finalist

The [J1600](https://info.mobilerobot.com/products/j1600/overview/) launched as the company's first product in January 2026. On 29 January, the company opened its [2026 technical webinar series](https://info.mobilerobot.com/newsroom/events/technical-webinars/) with a live deep dive on the J1600 and announced the J1600 as an IFOY finalist. Shipping was scheduled for Q2 2026.

On 12 January 2026, [Fernando Fandiño Oliver](https://info.mobilerobot.com/company/team/leadership/) joined as **Senior Vice President EMEA**. His remit covers regional business development, market expansion, customer and partner relationships, strategic initiatives, and execution of the company's long-term growth strategy across Europe, the Middle East, and Africa.

Late 2025 — market launch, recognition, pre-orders

- **20 October 2025** — recorded J1600 [market-launch date](https://info.mobilerobot.com/company/history/product-launch-timeline/).
- **November 2025** — the company joined the [NVIDIA Inception](https://info.mobilerobot.com/company/collaborations/nvidia-inception/) program and was named to The Robot Report's 100 Robotics Startups to Watch (Startup Radar 2025). See [Startup Recognition](https://info.mobilerobot.com/newsroom/awards/startup-recognition/).
- **2 December 2025** — J1600 pre-orders opened.

November 2024 — founding

Emil Hauch Jensen and Odin Kudahl Skovsted [founded The Mobile Robot Company](https://info.mobilerobot.com/company/history/founding-story/) in Denmark. Their combined experience covered hundreds of customers and more than 10,000 deployed robots; they concluded that robot projects were too hard, slow, and complex, and formed the company to make mobile robots more [operator-centric](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/), easier to use, and more flexible. See [Behind the Scenes](https://info.mobilerobot.com/newsroom/stories/behind-the-scenes/) and [Company](https://info.mobilerobot.com/category/company/).

Technology Stories

The [J1600](https://info.mobilerobot.com/products/j1600/overview/) is built on a handful of technical choices that define the product. This page tells the story behind each.

A new tier between two extremes

Manual pallet jacks preserve flexibility but require [operator walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) and travel time. Fully automated systems can eliminate labor from a task but often need expert configuration, integration, infrastructure, and stable processes. [Dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) creates a tier between them: the operator performs judgment-heavy pickup and [exception handling](https://info.mobilerobot.com/applications/scenarios/handling-exceptions-and-irregular-loads/), and the robot performs repetitive travel and floor-level drop-off. The intended balance is roughly 80% automation rather than 100%, with greater flexibility and a lower entry cost. The IFOY jury recognized exactly this tier when the J1600 won [Industrial Truck of the Year 2026](https://info.mobilerobot.com/newsroom/awards/ifoy-award-2026/).

Navigation without infrastructure

The J1600 navigates with [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (simultaneous localization and mapping) processed on 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 — no fixed tracks, wires, reflectors, or building modifications. The system scans environmental structures at heights reaching up to 70 m above the vehicle, and its 3D mapping is designed for greater precision and reliability than traditional 2D navigation in complex or changing environments. That is what makes the vehicle usable in [brownfield sites](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) with changing layouts. Full details are in the [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/).

Safety in layers

[Navigation and safety are deliberately 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/>). The 3D LiDAR and RGB AI camera belong to the control stack; personnel protection uses two dedicated 2D safety LiDARs, certified components, and an independent safety controller. A 360-degree protective field supports forward and reverse autonomous travel, blue light strips display the protected area, and the field expands as speed increases. The operator must confirm entry into automatic mode, and grabbing the tiller returns the vehicle to manual control immediately. How the layers work together is explained 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/>).

Teach and repeat, not programming

Locations are created by driving to a point and tapping **Save location**; there is no software limit on how many. Tasks recombine saved points, so an operator never demonstrates every possible A-to-B variation. Training takes about 30 minutes for an existing pallet-jack operator, and basic use requires neither Wi-Fi nor an IT project. The tutorial video is on [How-To Videos](https://info.mobilerobot.com/newsroom/videos/how-to-vid-eos/) (<https://info.mobilerobot.com/newsroom/videos/how-to-vid-eos/>).

Speaking the fleet language

For sites that grow beyond a single robot, the J1600's [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>) adds full [VDA 5050](https://info.mobilerobot.com/products/software/vda-5050/) (<https://info.mobilerobot.com/products/software/vda-5050/>) support — the interoperability standard that lets robots from different vendors coexist under a compatible fleet layer — a [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/documentation/technical-integration/fleet-manager-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/>), and advanced mission planning. The company works with established VDA 5050 fleet-management providers. Automation can start small and scale progressively.

The philosophy underneath

All of these choices follow one principle: human judgment is not a system failure. The reasoning is laid out in [human-in-the-loop automation](https://info.mobilerobot.com/docum) (<https://info.mobilerobot.com/docum>

[entation/concepts/human-in-the-loop-automation/](#)), and the situations where people outperform machines are illustrated in [Customer Applications](https://info.mobilerobot.com/newsroom/stories/customer-applications/) (<https://info.mobilerobot.com/newsroom/stories/customer-applications/>) and [Behind the Scenes](https://info.mobilerobot.com/newsroom/stories/behind-the-scenes/) (<https://info.mobilerobot.com/newsroom/stories/behind-the-scenes/>).

Partner Stories

The Mobile Robot Company [sells through an international network](https://info.mobilerobot.com/company/about/business-model/) of distributors, integrators, and service partners. By June 2026, [distributor partnerships existed in eight countries](https://info.mobilerobot.com/company/history/growth-and-international-expansion/) and the network was expanding. This page collects stories from that network.

ALCA Technologies: automation for imperfect warehouses

[In content dated 8 July 2026](https://info.mobilerobot.com/newsroom/press-releases/partner-announcements/), the company thanked [ALCA Technologies S.r.l.](https://info.mobilerobot.com/company/collaborations/technology-collaborations/) for collaboration and continued partnership. The collaboration illustrates warehouse conditions that can disrupt rigid automation: broken pallets, loose strapping, hanging stretch wrap, dust, and other imperfect or changing handling conditions.

The [J1600](https://info.mobilerobot.com/products/j1600/overview/) addresses these cases through [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/): the operator uses experience and situational awareness during pallet pickup, while the vehicle performs the repetitive autonomous transport. The presented outcomes were less [non-value-added walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/), safer pallet handling, smoother material flow, higher productivity, and better adaptability in dynamic warehouse environments.

United Symbol Open House: three days in Sassuolo

ALCA Technologies also provided local support when the J1600 was demonstrated at the **United Symbol Open House** in Sassuolo, Modena, Italy, over three days ending 29 June 2026. United Symbol hosted industry leaders and end customers from multiple industries, who saw dual-mode operation live and discussed warehouse efficiency, reduced manual handling, and scalable automation with the team. A 30 June recap thanked United Symbol for hosting and ALCA Technologies for support, professionalism, and collaboration. See [Past Events](https://info.mobilerobot.com/newsroom/events/past-events/).

How the partner channel works

Partners deliver local demonstrations, trials, deployment, service, and customer relationships; the company supplies robots, parts, software, technical support, training, and leads. List prices are public, and customer inquiries are routed 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/>), rather than fulfilled directly by the company.

Qualified integrators, distributors, and service partners [can apply by country](https://info.mobilerobot.com/partners/program/application-process/) (<https://info.mobilerobot.com/partners/program/application-process/>) — the invitation is repeated in the company's [partner videos](https://info.mobilerobot.com/newsroom/videos/customer-and-partner-videos/) (<https://info.mobilerobot.com/newsroom/videos/customer-and-partner-videos/>), and program details are under [Partners](https://info.mobilerobot.com/category/partners/) (<https://info.mobilerobot.com/category/partners/>).

Customer Applications

The [J1600](https://info.mobilerobot.com/products/j1600/overview/) is designed for indoor, floor-to-floor pallet transport. This page collects the application patterns customers and prospects work with, and the demonstrations that show them in practice. The full application catalog is under [Applications](https://info.mobilerobot.com/category/applications/).

Where the J1600 is applied

- **[Inbound receiving](https://info.mobilerobot.com/applications/use-cases/inbound-receiving/)**: unload a truck manually, then send the pallet to inspection or storage autonomously.
- **[Production supply](https://info.mobilerobot.com/applications/use-cases/production-supply/)**: an operator prepares a pallet; the J1600 delivers materials to the production line on demand.
- **[Cross-docking](https://info.mobilerobot.com/applications/use-cases/cross-docking/)**: shuffle pallets across multiple origins and destinations without a bespoke task for every pair.
- **[Temporary storage](https://info.mobilerobot.com/applications/use-cases/temporary-storage/)**: create short-lived storage points when demand changes — a new location takes minutes to add.
- **[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/)**: 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/)**: work around changing layouts and obstacles without permanent infrastructure.

Loads beyond the Euro pallet

Customers move [open cages, barrels, and other open-base carriers](https://info.mobilerobot.com/applications/use-cases/open-cages-and-alternative-load-carriers/) within the [supported envelope](https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/) of 1,250 x 1,250 mm and up to 1,700 mm load height — "everything that's open we can pick up", as the company's [flexibility video](https://info.mobilerobot.com/newsroom/videos/customer-and-partner-videos/) puts it. For [sensitive or unstable loads](https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/), the operator uses manual judgment for pickup and close maneuvering, then hands the long transport route to autonomy.

Who the typical customer is

Target environments include [manufacturing](https://info.mobilerobot.com/applications/industries/manufacturing/), [warehousing](https://info.mobilerobot.com/applications/industries/warehousing/), third-party logistics, [e-commerce fulfillment](https://info.mobilerobot.com/applications/industries/e-commerce-and-fulfillment/), and [grocery and FMCG distribution](https://info.mobilerobot.com/applications/industries/grocery-and-fmcg/). The [primary focus](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, plus larger sites with many small local material flows. The economics are intended to work at eight hours per day, five days per week — no 24/7 operation required.

Seeing it work before buying

Three evaluation routes are available: a 30–60 minute hands-on [demonstration](https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/) at a partner experience center or customer site; a [two-week paid trial](https://info.mobilerobot.com/products/buying-and-deployment/two-week-trial/) (€4,000 list, including setup and support, with free return at any time); and a [proof of concept](https://info.mobilerobot.com/applications/planning/proof-of-concept-planning/), either in the [Copenhagen demo area](https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/) or with machines brought to the customer's plant.

The strongest evidence of ease of adoption is the [first-time-user demonstration at TEST CAMP](https://info.mobilerobot.com/newsroom/events/test-camp/): a logistics professional who had never used the J1600 saved a location, created a drop-and-return task, and sent the robot on its way within minutes. The recording is on [Product Demonstrations](https://info.mobilerobot.com/newsroom/videos/product-demonstrations/).

Application limits

Automatic driving is indoor and [level-floor](https://info.mobilerobot.com/documentation/installation/floor-requirements/) (0% automatic gradeability), automatic drop is at floor level, [operation is limited to 5–40°C](https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/), and loads must have an open base. Situations that need human judgment — dock plates, damaged pallets, congestion — are covered in [human-in-the-loop automation](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/).

Behind the Scenes

How the company builds and tests the [J1600](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>), and the experiences that shaped its [design philosophy](https://info.mobilerobot.com/company/about/our-approach-to-automation/) (<https://info.mobilerobot.com/company/about/our-approach-to-automation/>).

The founding story

Before [founding The Mobile Robot Company](https://info.mobilerobot.com/company/history/founding-story/) (<https://info.mobilerobot.com/company/history/founding-story/>) in November 2024, Emil Hauch Jensen and Odin Kudahl Skovsted had collectively completed projects for hundreds of customers and deployed more than 10,000 robots at international mobile-robotics and automation companies. Their conclusion: robot projects were too hard, too slow, and too complex. The company was formed to make mobile robots operator-centric, easier to use, and more flexible. More on [the team](https://info.mobilerobot.com/company/team/team-members/) (<https://info.mobilerobot.com/company/team/team-members/>) is under [Company](https://info.mobilerobot.com/category/company/) (<https://info.mobilerobot.com/category/company/>).

The Copenhagen test facility

The company validates the J1600 in a [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: deliberately uneven flooring, water-filled test loads, and multiple test setups. The point is to prove the vehicle in the messy conditions of an actual warehouse, not a laboratory. Customers can visit the facility for [demonstrations](https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/) (<https://info.mobilerobot.com/products/buying-and-deployment/request-a-demonstration/>) and trials; for a [proof of concept](https://info.mobilerobot.com/applications/planning/proof-of-concept-planning/) (<https://info.mobilerobot.com/applications/planning/proof-of-concept-planning/>), machines can be taken to the customer's plant. CTO Odin Kudahl Skovsted tours the facility in a [video](https://info.mobilerobot.com/newsroom/videos/product-demonstrations/) (<https://info.mobilerobot.com/newsroom/videos/product-demonstrations/>).

Made in Denmark

The J1600 is manufactured in Denmark, and the company is [headquartered in Hvidovre](https://info.mobilerobot.com/company/locations/headquarters/) (<https://info.mobilerobot.com/company/locations/headquarters/>).

The site visit that shaped the philosophy

CEO Emil Hauch Jensen visited a major e-commerce cross-docking facility in Germany, and the visit influenced the J1600's [flexibility-first philosophy](https://info.mobilerobot.com/applications/results/operational-flexibility/) (<https://info.mobilerobot.com/applications/results/operational-flexibility/>). His observations:

- trucks arrived at approximately 10-minute intervals across five inbound loading bays;
- each parcel received an internal barcode within about 30 seconds of unloading and became available for sale almost immediately;
- software made millisecond-level throughput decisions;
- yet not every process was automated, and some robotic systems were being phased out in favor of reliable conveyors and sorters;
- minor mechanical downtime of under 10 minutes could occur several times per day;
- layout, flow, buffer, and SKU-mix changes could occur several times per week.

The conclusion: flexibility and robustness are business necessities even in highly automated facilities. That observation connects directly to [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>) — autonomy for repetitive travel, with immediate manual control when conditions change.

Why humans stay in the loop

The company's design logic is captured in ten situations where human context beats automation: 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, and avoiding automation overhead. The full argument is 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/>), and the technical consequences are told in [Technology Stories](https://info.mobilerobot.com/newsroom/stories/technology-stories/) (<https://info.mobilerobot.com/newsroom/stories/technology-stories/>).