



The Mobile Robot Company

Knowledge Center — Features and Benefits · 2026-08-04

<https://info.mobilerobot.com/products/j1600/features-and-benefits>

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.