



The Mobile Robot Company

Knowledge Center — Is the J1600 Right for My Application? · 2026-08-04

<https://info.mobilerobot.com/applications/planning/is-the-j1600-right-for-my-application>

Is the J1600 Right for My Application?

The J1600 is a dual-mode [self-driving pallet jack](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/).

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/) — 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/), 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/) and [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/), storage, [production supply](https://info.mobilerobot.com/applications/use-cases/production-supply/), [staging](https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/), [cross-docking](https://info.mobilerobot.com/applications/use-cases/cross-docking/), or [shipping](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/). 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.