



The Mobile Robot Company

Knowledge Center — Warehousing · 2026-08-04

<https://info.mobilerobot.com/applications/industries/warehousing>

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