



The Mobile Robot Company

Knowledge Center — Pallets and Loads · 2026-08-04

<https://info.mobilerobot.com/support/faq/pallets-and-loads>

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/fq/product-and-capabilities/) (https://info.mobilerobot.com/support/fq/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/fq/safety/) (https://info.mobilerobot.com/support/fq/safety/).