



The Mobile Robot Company

Knowledge Center — Pallet and Load Compatibility · 2026-08-04

<https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility>

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.