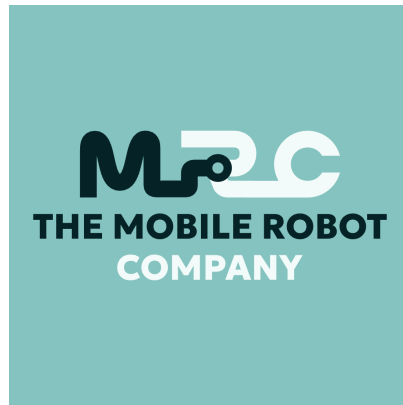




The Mobile Robot Company

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

<https://info.mobilerobot.com/applications/planning/pallet-and-load-suitability>

Pallet and Load Suitability

The J1600 carries up to 1,600 kg on any forkable carrier with an open base. This page defines the load envelope, the supported pallet types, and the fork geometry you need to verify your own carriers against.

PRELIMINARY SPECIFICATIONS

The January 2026 specifications on this page are preliminary and subject to change. Confirm limits against current product documentation before a deployment decision.

The one hard requirement: an open base

The carrier must have an **open base with no bottom deck board** so the forks can enter. Closed-deck pallets are not supported. Beyond that, the carrier must fit the envelope below.

Load envelope

Parameter	Limit
Maximum load weight	1,600 kg (about 3,500 lb)
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)

Overhang counts: measure the load, not just the pallet. The exact envelope is 1,250 mm; some overview material rounds it to 1.2 m.

Supported carrier types

Carrier	Support
EPAL Euro Pallet	Supported
EPAL 3	Supported
EPAL 6	Supported
GMA pallets	All GMA pallets with an open base
Custom carriers	Any forkable open-base carrier within the size limits

Custom carriers include [open cages, barrels on open-base carriers, and other load 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/>). Compatibility 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 — validate special loads with your partner, ideally during a [trial](https://info.mobilerobot.com/applications/planning/trial-planning/) (<https://info.mobilerobot.com/applications/planning/trial-planning/>).

Fork geometry

Check your carriers against 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

Heights: manual versus autonomous

[Manual mode](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>) picks and drops at up to 1,600 mm (63 in). Autonomous delivery is always at floor level. Plan flows so every autonomous destination accepts a floor-level drop; any higher placement is an operator task. See [dual mode](https://info.mobilerobot.com/products/j1600/dual-mode/) (<https://info.mobilerobot.com/products/j1600/dual-mode/>).

Sensitive and unstable loads

[Loads that need judgment](https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/) (<https://info.mobilerobot.com/applications/use-cases/sensitive-or-unstable-loads/>) — top-heavy stacks, leaning loads, damaged pallets, liquids, or barrels — are exactly what the dual-mode split is for. The operator handles pickup and close maneuvering manually, then hands the repetitive travel to autonomous mode. Load stability remains an operator judgment; a [load-detection sensor](https://info.mobilerobot.com/safety-compliance/safety-functions/load-detection/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/load-detection/>) (Performance Level b) confirms the presence of a load. For the reasoning behind this division of work, see [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/>).

Next step

Work the numbers above into the [application qualification checklist](https://info.mobilerobot.com/applications/planning/application-qualification-checklist/) (<https://info.mobilerobot.com/applications/planning/application-qualification-checklist/>), and check the rest of your facility with [Site suitability](https://info.mobilerobot.com/applications/planning/site-suitability/) (<https://info.mobilerobot.com/applications/planning/site-suitability/>).