

AI-native pallet handling robot

PUDU MP2000

A robot forklift built for floor-to-floor pallet handling. It carries two tonnes, runs up to twelve hours on a charge and works aisles as narrow as two metres, with no site modifications and no platform integration.



2,000 kg

Rated payload

12 hours

Runtime, unloaded

2.0 m

Right-angle aisle

What it does

The MP2000 moves pallets point to point between goods-in, storage, production and dispatch. Navigation is 3D LiDAR-SLAM and VSLAM, so there are no floor magnets, reflectors or guide tape: map the area once and the robot plans its own routes. Maximum lift height is 200 mm, enough to carry a pallet rather than place one into racking.

Capabilities

Plug-and-play deployment

Multi-sensor navigation and on-board intelligence mean no site modifications, no platform integration and no lengthy commissioning.

Forgiving pallet pickup

Tolerates 15 cm of lateral offset and 15° of angular deviation, so hand-placed pallets do not need straightening first.

Omni-Sense safety

Depth cameras, 3D LiDAR and a multi-layer sensor suite give 360° awareness. It reroutes around static obstacles, stops for moving ones and warns audibly and visually.

AI-native autonomy

Self-learning storage locations, load-carrier recognition and clearance assessment. Scanning a location group generates its data automatically, cutting setup by around 80%.

Works in tight spaces

A 2.0 m right-angle stacking aisle, 1.1 m unloaded passability and a 1350 mm turning radius. Storage density is preserved.

Fleet orchestration

Each robot decides and routes for itself, with inter-robot communication keeping a fleet coordinated even offline.

Variants

MP2000 Standard

MPID01-M · 620 mm fork outer width

The default choice for 1200 × 1000 and 1200 × 800 pallets in aisles of around two metres.

MP2000 Narrow Fork

MPID01-N · 550 mm fork outer width

For tighter pallet openings and closer stacking. Same payload and the same running gear.

Typical applications

E-commerce warehousing

Receiving and staging, first-level rack locations, pre-pick staging and outbound consolidation.

350 – 1,200

average daily pallet throughput

Full-pallet putaway, internal transfers, picking replenishment and outbound consolidation.

Manufacturing

Raw material warehouse, line-side storage, packaging, finished goods and the shipping dock.

200 – 800

average daily pallet throughput

Raw-material distribution, line-side replenishment, process transfer and finished-goods putaway.

Inbound and outbound coverage includes floor storage and first-level racking only.

Technical specification

LOAD AND FORK

Rated payload	2,000 kg
Maximum lift height	200 ±5 mm
Lowered fork height	80 ±5 mm
Fork outer width	550 / 620 mm
Fork insertion time	20 seconds
Pallet pick offset angle	up to 15°
Compatible pallets	3-runner, perimeter, 9-leg

DIMENSIONS

Overall L × W × H	1585 × 910 × 1870 mm
Turning radius	1350 mm

PERFORMANCE

Speed, loaded	1.2 m/s
Speed, unloaded	1.6 m/s
Gradeability, laden	3°
Gradeability, unladen	8°
Drive mode	autonomous or manual

BATTERY AND CHARGING

Runtime, unloaded	12 hours
Runtime, full load	6 hours
Charge time, 200–240V	about 2 hours
Charge time, 100–120V	about 3.2 hours
Charge method	automatic or manual

NAVIGATION AND CONTROL

Navigation	3D LiDAR–SLAM, VSLAM
Dispatch	PUDU Link, API, voice, button
Optional integration	lifts, automatic doors
Voice module	optional add-on

SITE REQUIREMENTS

90° stacking aisle	2000 mm
Unloaded passability	1100 mm
Threshold crossing	10 mm
Gap crossing	35 mm
Operating environment	indoor, flat floor

Manufacturer's published figures, subject to change without notice.

Is the MP2000 right for your site?

A good fit if

- You move pallets at floor level between goods-in, storage and dispatch
- You run more than one shift, or struggle to cover the ones you have
- Loads are up to 2,000 kg on three-runner, perimeter-base or nine-leg pallets
- Right-angle aisles are 2 m or wider, on a flat indoor floor
- You want it talking to your WMS or ERP rather than running as an island

Not the right answer if

- You need pallets lifted into racking. It lifts 200 mm, enough to carry a pallet, not to store one
- Loads regularly exceed 2,000 kg
- You work outdoors, in a yard, or on ramps steeper than 3° under load
- Aisles are tighter than 2 m for right-angle pickup

Supplied, installed and supported by Autrix

Autrix is a solutions partner, not a box shifter. Everything below is part of the deployment, not a separate project.

- 01**
Free automation assessment
We walk your routes, floor and traffic, measure the moves and show you what automating them is worth. No charge and no obligation. If the MP2000 is the wrong answer for your site, we will say so.
- 02**
Installed and running
We deliver, map the area, configure the robot and hand it over working. You do not get a box and a manual.
- 03**
Connected to your systems
Our ACS (Autrix Control System) can integrate and connect with existing ERP or WMS systems for a future-ready deployment.
- 04**
Trained and supported
We train your team and look after the robot from the UK. On contract hire, support is included in the monthly cost.

Ways to buy

Outright purchase

Buy the robot and own the asset. Support and servicing are quoted separately, so you pay for what you want and nothing else.

Contract hire

One monthly cost with support included, no large capital outlay and nothing separate to budget for servicing. Available to limited companies, subject to status.

There is no single price list. The right answer depends on how many robots you need, how hard they will work and how you would rather account for them. Fleet discounts are available. Ask and we will send figures through with your assessment. UK lead time is typically five weeks from order. All prices exclude VAT.

Book a free automation assessment

We measure the pallet moves you actually make and show you the numbers for your site before you commit to anything.

01522 246 990 · autrix.co.uk