



The Mobile Robot Company

Knowledge Center — Charging · 2026-08-04

<https://info.mobilerobot.com/documentation/user-guides/charging>

Charging

The J1600 supports two charging methods: manual plug-in charging and, with the optional [automatic charger](https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/) (<https://info.mobilerobot.com/products/chargers-and-accessories/automatic-charger/>), self-docking opportunity charging.

Battery

Parameter	Value
Battery	24 V, 200 Ah
Chemistry	Lithium iron phosphate (LiFePO4)
Charging rate	Approximately 47 percentage points per hour
Drain, driving fully loaded	Approximately 13% per hour
Drain, driving unloaded	Approximately 12% per hour
Drain, standby	Approximately 2% per hour

Runtime exceeds eight hours in a typical duty cycle. The [drain rates](https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/) (<https://info.mobilerobot.com/documentation/technical-reference/battery-specifications/>), imply approximately 7.7 hours of continuous fully loaded driving or 8.3 hours unloaded — these are calculated figures, not guaranteed runtimes, and do not account for standby, lifting, duty cycle, battery reserve, or operating conditions.

The [charging-current relay](https://info.mobilerobot.com/safety-compliance/safety-functions/charging-safety/) (<https://info.mobilerobot.com/safety-compliance/safety-functions/charging-safety/>) is a safety function rated PL b.

Manual charging

Manual charging works like charging a conventional electric pallet jack: plug in the charger during a break or whenever the machine is idle — for example before lunch.

The [manual charger](https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/) (<https://info.mobilerobot.com/products/chargers-and-accessories/manual-charger/>) lists at €3,600.

Automatic charging

With the optional automatic charger, the robot drives to the charging station, positions itself in front of the charger, and a charging interface extends to the vehicle's charging plates. This enables [opportunity charging](https://info.mobilerobot.com/applications/scenarios/automatic-charging/) while the robot is not busy, without operator involvement.

- Automatic charging is an advanced automation capability.
- When purchased with the commissioning package, automatic-charging setup is part of installation Day 1 — see [First-Time Setup](https://info.mobilerobot.com/documentation/getting-started/first-time-setup/#the-commissioning-package).
- The automatic charger lists at €8,400.

Which charger to choose

- Single robot, single shift, predictable breaks: manual charging keeps cost lowest and mirrors the routine operators already know.
- Higher utilization or hands-off operation: automatic charging lets the robot top up on its own between tasks.

A charger is not included with the robot purchase, so [plan for one when ordering](https://info.mobilerobot.com/documentation/installation/charger-installation/) — see [Delivery and Unpacking](https://info.mobilerobot.com/documentation/getting-started/delivery-and-unpacking/).

PRELIMINARY SPECIFICATIONS

Battery and charging figures are preliminary January 2026 specifications and are subject to change. See the [technical specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/).