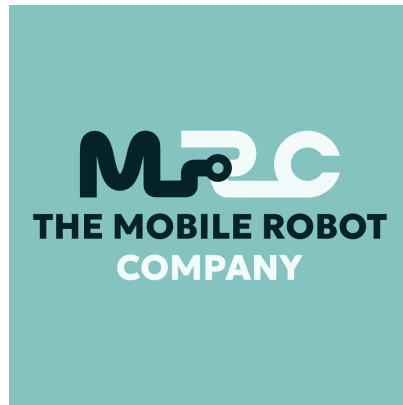




The Mobile Robot Company

Knowledge Center — Deliver and Return · 2026-08-04

<https://info.mobilerobot.com/applications/scenarios/deliver-and-return>

Deliver and Return

Deliver and return — also called the **boomerang** task — sends the J1600 to a saved destination, drops the pallet at floor level, and brings the vehicle straight back to the origin or operator. It is the most commonly performed and demonstrated J1600 task, because it turns one operator plus one robot into a continuous loop.

How it works

1. Pick up the pallet manually.
2. Choose the saved drop destination on the touchscreen.
3. Choose **return to origin/operator** as the post-delivery behavior.
4. Confirm automatic mode with the start button and step away.
5. The robot delivers, drops at floor level, and returns empty to where it started.

While the robot is out, the operator prepares the next pallet. When it returns, the next cycle starts immediately — drop, go, repeat. The full task mechanics are described in [Manual Pickup and Autonomous Delivery](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>).

Where the loop fits

The boomerang suits any flow where pallets keep leaving the same place:

- **Inbound receiving** (<https://info.mobilerobot.com/applications/use-cases/inbound-receiving/>): the operator stays at the trailer; the robot shuttles each pallet to inspection or storage and comes back.
- **Production supply** (<https://info.mobilerobot.com/applications/use-cases/production-supply/>): the kitting or supermarket operator loads; the robot feeds the line and returns.
- **Production-to-shipping** (<https://info.mobilerobot.com/applications/use-cases/production-to-shipping-transport/>): the line-end operator keeps packing while finished pallets flow to staging.
- **Buffer feeding** (<https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/>): a steady loop keeps a buffer at level without anyone walking.

The longer the leg, the more [walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) each loop removes — the route can be a few meters or well over 100 meters.

Behavior on the way

On both the loaded outbound leg and the empty return, the robot navigates with [3D LiDAR SLAM](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) at up to 5.4 km/h, avoids obstacles, and protects its surroundings with a speed-dependent 360-degree safety field shown by blue light strips. The 2D safety LiDARs and certified safety functions support both forward and reverse travel — see [Operation in Crowded Environments](https://info.mobilerobot.com/applications/scenarios/operation-in-crowded-environments/).

Alternatives

If the vehicle should stay at the destination instead of returning, use [Deliver and Wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/). If it should clear the floor after the last drop, use [Deliver and Park](https://info.mobilerobot.com/applications/scenarios/deliver-and-park/). To chain a second leg instead of returning, use [A-to-B-to-C Transport](https://info.mobilerobot.com/applications/scenarios/a-to-b-to-c-transport/).