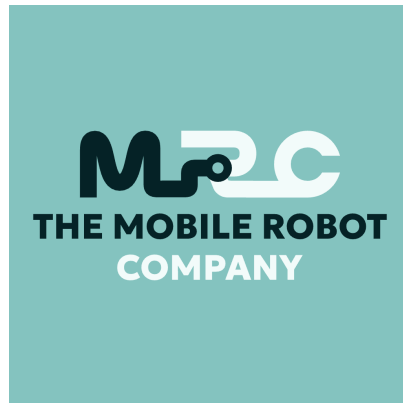




# The Mobile Robot Company

Knowledge Center — Floor and Environment Requirements · 2026-08-04

<https://info.mobilerobot.com/da-dk/safety-compliance/safe-deployment/floor-and-environment-requirements>

# Floor and Environment Requirements

The J1600 (<https://info.mobilerobot.com/da-dk/products/j1600/overview/>) is designed for indoor, floor-to-floor pallet transport. This page lists the floor and environmental limits a site must meet.

## Floor requirements

| Parameter                            | Metric   | Imperial/other |
|--------------------------------------|----------|----------------|
| Gradeability, automatic mode         | 0°       | 0%             |
| Gradeability, manual mode, no load   | 2.86°    | 5%             |
| Gradeability, manual mode, full load | 1.72°    | 3%             |
| Maximum traversable bump height      | 25 mm    | 1 in           |
| Maximum traversable gap width        | 20 mm    | 0.8 in         |
| Floor flatness/levelness             | TR34 FM3 | FF 25 / FL 20  |
| Ground clearance                     | 30 mm    | 1.2 in         |

Autonomous travel is a level-floor application: automatic gradeability is 0%. Slopes, ramps, and dock plates remain manual tasks, within the manual-mode limits above. Plan autonomous routes accordingly during the [site risk assessment](https://info.mobilerobot.com/da-dk/safety-compliance/safe-deployment/site-risk-assessment/) (<https://info.mobilerobot.com/da-dk/safety-compliance/safe-deployment/site-risk-assessment/>).

## Environmental requirements

| Parameter                     | Metric | Imperial/other                                                       |
|-------------------------------|--------|----------------------------------------------------------------------|
| Minimum operating temperature | 5°C    | 41°F                                                                 |
| Maximum operating temperature | 40°C   | 104°F                                                                |
| Relative humidity             | 20–80% | non-condensing                                                       |
| Ingress protection            | IP21   | protected against objects over 12.5 mm and vertically dripping water |

IP21 means the vehicle is protected against solid objects larger than 12.5 mm and vertically dripping water — it is an indoor rating, not protection against wash-down, spray, or outdoor conditions.

## Real-world floors

The company validates the J1600 under intentionally imperfect conditions at its [Copenhagen test and demo facility](https://info.mobilerobot.com/da-dk/company/locations/test-and-demonstration-facility/) (<https://info.mobilerobot.com/da-dk/company/locations/test-and-demonstration-facility/>), including uneven flooring and water-filled test loads. The limits on this page still apply to production deployments.

No infrastructure changes are required within these limits: the J1600 navigates by [3D LiDAR SLAM](https://info.mobilerobot.com/da-dk/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/da-dk/products/j1600/navigation-and-obstacle-avoidance/>), without tracks, wires, reflectors, or building modifications.

## Related requirements

- Load and carrier limits: [Approved loads and pallets](https://info.mobilerobot.com/da-dk/safety-compliance/safe-deployment/approved-loads-and-pallets/) (<https://info.mobilerobot.com/da-dk/safety-compliance/safe-deployment/approved-loads-and-pallets/>)
- Full specification table: [J1600 technical specifications](https://info.mobilerobot.com/da-dk/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/da-dk/products/j1600/technical-specifications/>)
- Validation at go-live: [Commissioning and validation](https://info.mobilerobot.com/da-dk/safety-compliance/safe-deployment/commissioning-and-validation/) (<https://info.mobilerobot.com/da-dk/safety-compliance/safe-deployment/commissioning-and-validation/>)

**ⓘ PRELIMINARY SPECIFICATIONS**

These January 2026 specifications are preliminary and subject to change. Use current product documentation for deployment decisions.