



The Mobile Robot Company

Knowledge Center — Floor Requirements · 2026-08-04

<https://info.mobilerobot.com/documentation/installation/floor-requirements>

Floor Requirements

Floors decide where the J1600 can drive autonomously. This page collects every floor-related limit so you can assess a facility route by route.

PRELIMINARY SPECIFICATIONS

The January 2026 [specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>) are preliminary and subject to change.

Flatness and levelness

Autonomous routes require floor flatness and levelness to **TR34 FM3**, equivalent to **FF 25 / FL 20**. This is a standard industrial concrete-floor classification; most existing warehouse and production floors in reasonable condition meet it.

Slopes

Mode	Gradeability
Automatic mode	0° / 0%
Manual mode, no load	2.86° / 5%
Manual mode, full load	1.72° / 3%

Autonomous driving is a level-floor application. Any slope — including dock plates and ramps — is [driven manually](https://info.mobilerobot.com/documentation/user-guides/manual-operation/) (<https://info.mobilerobot.com/documentation/user-guides/manual-operation/>), where the operator judges alignment and surface condition. Plan autonomous [drop points](https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/) (<https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/>) on level floor only.

Bumps, gaps, and clearance

Parameter	Metric	Imperial
Maximum traversable bump height	25 mm	1 in
Maximum traversable gap width	20 mm	0.8 in
Ground clearance	30 mm	1.2 in

Expansion joints, thresholds, and drain covers along autonomous routes must stay within the bump and gap limits.

Wheels

The J1600 runs on polyurethane wheels:

- Drive wheel: 75 mm wide × 230 mm diameter (3 × 9 in).
- Load wheels: 70 mm wide × 80 mm diameter (2.8 × 3.1 in).

Polyurethane wheels suit smooth, dry indoor concrete. The IP21 rating and indoor design mean wet or contaminated floors are outside the intended envelope — see [Operating Environment Requirements](https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/) (<https://info.mobilerobot.com/documentation/installation/operating-environment-requirements/>).

Real-world floors are the design target

The J1600 is validated under intentionally imperfect conditions, including uneven flooring and water-filled test loads at the company's [Copenhagen test area](https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/) (<https://info.mobilerobot.com/company/locations/test-and-demonstration-facility/>), and its 3D navigation is built for [brownfield sites](https://info.mobilerobot.com/applications/use-cases/brownfield-automation/) (<https://info.mobilerobot.com/applications/use-cases/brownfield-automation/>) with changing layouts. That robustness does not extend the limits above: a route that exceeds the bump, gap, slope, or flatness figures needs manual driving or a different path.

Before delivery, walk each planned route with the [Site Readiness Guide](https://info.mobilerobot.com/documentation/installation/site-readiness-guide/) (<https://info.mobilerobot.com/documentation/installation/site-readiness-guide/>). If you buy the commissioning package, the pre-installation feasibility check validates the selected routes — see the

[Deployment Checklist \(https://info.mobilerobot.com/documentation/installation/deployment-checklist/\)](https://info.mobilerobot.com/documentation/installation/deployment-checklist/).