



The Mobile Robot Company

Knowledge Center — ISO 12100 · 2026-08-04

<https://info.mobilerobot.com/safety-compliance/standards/iso-12100>

ISO 12100

EN ISO 12100:2010 is the foundational machinery-safety standard in the J1600's [compliance list](https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/) (<https://info.mobilerobot.com/safety-compliance/certificates/compliance-statements/>). It defines the risk-assessment and risk-reduction method on which the other safety standards build.

What the standard covers

ISO 12100, *Safety of machinery — General principles for design — Risk assessment and risk reduction*, describes how a machine designer identifies hazards, estimates and evaluates risks, and reduces them. Its three-step method, applied in order, is:

1. **Inherently safe design** — remove the hazard or reduce it by design choices.
2. **Safeguarding and protective measures** — guard against risks that cannot be designed out.
3. **Information for use** — warn about and document residual risks that remain after the first two steps.

How it applies to the J1600

The J1600's [layered protection](https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/>), follows this logic. Design measures such as operator-confirmed mode changes and floor-level autonomous delivery are complemented by safeguarding — the 360-degree protective field, two 2D safety LiDAR scanners, emergency stops, and safety functions with assigned Performance Levels under [ISO 13849-1](https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/) (<https://info.mobilerobot.com/safety-compliance/standards/iso-13849-1/>) — and by documented operating limits and [residual risks](https://info.mobilerobot.com/safety-compliance/safe-deployment/residual-risks/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/residual-risks/>).

The same method reappears at deployment: the pre-installation phase of the commissioning package includes a risk assessment of the customer site and the selected tasks and loads. See [Site risk assessment](https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/>) and [Commissioning and validation](https://info.mobilerobot.com/safety-compliance/safe-deployment/commissioning-and-validation/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/commissioning-and-validation/>).

Relationship to other standards

ISO 12100 supplies the general method; the product-specific requirements for the J1600's two operating modes come from [ISO 3691-4](https://info.mobilerobot.com/safety-compliance/standards/iso-3691-4/) (driverless operation) and [ISO 3691-1](https://info.mobilerobot.com/safety-compliance/standards/iso-3691-1/) (manual operation). All three are harmonized under the [EU machinery requirements](https://info.mobilerobot.com/safety-compliance/standards/eu-machinery-requirements/).

PRELIMINARY COMPLIANCE LIST

The J1600's compliance list comes from the preliminary January 2026 product documentation and is subject to change. Use current product documentation for deployment decisions.