

Industrial trucks - Additional requirements for
automated functions on trucks (ISO 24134:2006)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 24134:2018 sisaldab Euroopa standardi EN ISO 24134:2018 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 24134:2018 consists of the English text of the European standard EN ISO 24134:2018.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
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English Version

Industrial trucks - Additional requirements for automated functions on trucks (ISO 24134:2006)

Chariots de manutention - Exigences supplémentaires
pour les fonctions automatiques des chariots (ISO
24134:2006)

Flurförderzeuge - Zusätzliche Anforderungen für
automatische Funktionen von Staplern (ISO
24134:2006)

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European foreword

The text of ISO 24134:2006 has been prepared by Technical Committee ISO/TC 110 "Industrial trucks" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 24134:2018 by Technical Committee CEN/TC 150 "Industrial Trucks - Safety" the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2019, and conflicting national standards shall be withdrawn at the latest by April 2019.

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Endorsement notice

The text of ISO 24134:2006 has been approved by CEN as EN ISO 24134:2018 without any modification.

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Industrial trucks — Additional requirements for automated functions on trucks

1 Scope

This International Standard specifies the safety requirements for controls and control systems for the following automated functions of industrial trucks:

- steering (excluding direct mechanical guidance);
- travel;
- lifting and lowering operations;
- load manipulations, e.g. rotation, reach, slewing, tilting, clamping;
- combination and/or sequence of the above movements.

NOTE The control system is generally part of the truck but can include components external to the truck, e.g. the means of guidance for automated steering.

This International Standard is intended for use in conjunction with one or more of the applicable parts of ISO 3691.

This International Standard is not applicable to, and does not include, requirements for the following:

- safety equipment (e.g. devices for height limitation, speed limitation) used to override operator control;
- operation in severe conditions (e.g. extreme climates, freezer applications, strong magnetic fields);
- operation in environments subject to special rules (e.g. potentially explosive atmospheres);
- electromagnetic compatibility;
- transportation of passengers;
- handling of loads, the nature of which could lead to dangerous situations (e.g. molten metals, acids/bases, radiating materials).

Limitations in the scopes of the applicable parts of ISO 3691 also apply to this International Standard.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3691-1, *Industrial trucks — Safety requirements and verification — Part 1: Self-propelled industrial trucks, other than driverless, variable-reach trucks and burden-carrier trucks* ¹⁾

ISO 3691-2, *Industrial trucks — Safety requirements and verification — Part 2: Self-propelled variable-reach trucks* ¹⁾

ISO 3691-3, *Industrial trucks — Safety requirements and verification — Part 3: Additional requirements for trucks with elevating operator position and trucks specifically designed to travel with elevated loads* ¹⁾

ISO 3691-4, *Industrial trucks — Safety requirements and verification — Part 4: Driverless industrial trucks and their systems* ¹⁾

ISO 3691-5, *Industrial trucks — Safety requirements and verification — Part 5: Pedestrian-propelled trucks* ¹⁾

ISO 3691-6, *Industrial trucks — Safety requirements and verification — Part 6: Burden and personnel carriers* ¹⁾

ISO 12100-2:2003, *Safety of machinery — Basic concepts — General principles for design — Part 2: Technical principles and specifications*

ISO 13849-1—²⁾, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design*

ISO 20898—³⁾, *Industrial trucks — Electrical requirements*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

**3.1
automated function**
movement for transport or positioning of the truck and/or load initiated by the operator but not requiring continued action by the operator

**3.2
automated lifting and lowering**
automated function that controls intended vertical movements and/or positioning of the load-carrying device to a preselected height

**3.3
automated load manipulation**
automated function that controls load movements (e.g. rotation, reach, slewing, tilting, telescoping, clamping)

1) To be published. (Revision of ISO 3691:1980)
2) To be published. (Revision of ISO 13849-1:1999)
3) To be published. (Equivalent to EN 1175-1:1998)