
**Industrial trucks — Safety
requirements and verification —**

**Part 2:
Self-propelled variable-reach trucks**

*Chariots de manutention — Exigences de sécurité et vérification —
Partie 2: Chariots automoteurs à portée variable*



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Contents

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	2
3 Terms and definitions	3
4 Safety requirements and/or protective measures	5
4.1 General	5
4.1.1 Overall requirements	5
4.1.2 Normal climatic conditions	5
4.1.3 Normal operating conditions	6
4.1.4 Sharp edges	6
4.1.5 Electrical requirements	6
4.1.6 Stored energy components	6
4.2 Starting/moving	6
4.2.1 Unauthorized starting	6
4.2.2 Unintended movement and inadvertent activation	6
4.3 Brakes	7
4.3.1 General	7
4.3.2 Failure of energy supply	7
4.4 Manual control actuator	7
4.4.1 General	7
4.4.2 Travel and braking controls	8
4.4.3 Steering controls	9
4.4.4 Load-handling controls	9
4.4.5 Other controls	9
4.4.6 Marking	10
4.5 Power systems and accessories	10
4.5.1 Exhaust system	10
4.5.2 Cooling system	10
4.5.3 Fuel tanks	10
4.5.4 Access to engine and other compartments	10
4.5.5 Liquefied petroleum gas (LPG)-powered trucks	11
4.6 Systems for telescoping, lifting and tilting	13
4.6.1 Lift chains	13
4.6.2 Hydraulic lifting, telescoping and carriage tilting	14
4.6.3 Hydraulic systems	14
4.6.4 Fork arms	15
4.6.5 Fork-arm extensions	15
4.6.6 Fork carriers	15
4.6.7 Load-handling attachments	15
4.7 Operator positions	16
4.7.1 Dimensions	16
4.7.2 Operator's seat	16
4.7.3 Operator restraint	17
4.7.4 Operator access and egress	17
4.7.5 Protection from road wheels and objects thrown up by the wheels	17
4.7.6 Protection from burning	17
4.7.7 Protection against crushing, shearing and trapping	18
4.8 Stability	18
4.8.1 General	18
4.8.2 Specific operating conditions	18
4.8.3 Longitudinal stability determination	19
4.9 Protective devices	19

4.9.1	Overhead guard.....	19
4.9.2	Load backrest extension	19
4.9.3	Roll-over protective structures (ROPSs)	19
4.9.4	Warning device.....	19
4.9.5	Starter battery requirements.....	20
4.10	Visibility and lighting.....	20
4.10.1	Visibility.....	20
4.10.2	Lighting.....	20
4.11	Operator's cab	20
4.11.1	General.....	20
4.11.2	Doors and windows	20
4.11.3	Fire resistance.....	21
4.11.4	Ventilation.....	21
4.11.5	Heating, air conditioning and ventilation system.....	21
4.11.6	Demisting and defrosting.....	22
4.11.7	Pressurization system.....	22
4.11.8	Wipers and washers.....	22
4.11.9	Access and an emergency exit.....	23
4.11.10	Storage of instruction handbook.....	23
4.11.11	Additional operator's position	23
4.12	Provisions for transportation of the truck and removable attachments.....	23
4.13	Environmental requirements.....	23
4.13.1	Noise emissions.....	23
4.13.2	Vibration.....	23
4.13.3	Electromagnetic compatibility (EMC)	24
4.14	Devices for towing.....	24
5	Verification of safety requirements and/or protective measures.....	24
5.1	General.....	24
5.2	Structural verification.....	24
5.2.1	Test loads.....	24
5.2.2	Static test.....	25
5.2.3	Dynamic test.....	25
5.3	Functional verification.....	25
6	Information for use	26
6.1	General.....	26
6.2	Instruction handbook.....	26
6.2.1	Truck.....	26
6.2.2	Operation of truck.....	26
6.2.3	Details for battery-powered trucks	27
6.2.4	Details for internal-combustion-engine-powered trucks	28
6.2.5	Service and maintenance.....	28
6.2.6	Transportation, commissioning and storage.....	28
6.2.7	Truck modification	29
6.3	Marking.....	29
6.3.1	Information plates	29
6.3.2	Load chart.....	30
6.3.3	Information plate for trucks operating in special conditions.....	32
6.3.4	Other information	33
6.3.5	Languages.....	33
6.3.6	Operator restraint.....	33
	Annex A (informative) Rated capacity of truck.....	34
	Annex B (informative) List of significant hazards	37
	Annex C (normative) Verification of essential health and safety requirements	42
	Bibliography.....	46

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 110, *Industrial trucks*, Subcommittee SC 2, *Safety of powered industrial trucks*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 150, *Industrial trucks - Safety*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 3691-2:2016), which has been technically revised.

The main changes are as follows:

- exclusions and limitations in the Scope have been clarified;
- references for European regional requirements have been updated;
- requirements defining the normal operator position necessary in order for the controls to function have been added;
- operator weight has been updated;
- information relating to truck modification has been updated;
- verification methods have been added as a new [Annex C](#).

A list of all parts in the ISO 3691 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document is a type-C standard as stated in ISO 12100.

This document is of relevance, in particular, for the following stakeholder groups representing the market players with regard to machinery safety:

- machine manufacturers (small, medium and large enterprises);
- health and safety bodies (regulators, accident prevention organisations, market surveillance etc.).

Others can be affected by the level of machinery safety achieved with the means of the document by the above-mentioned stakeholder groups:

- machine users/employers (small, medium and large enterprises);
- machine users/employees (e.g. trade unions, organizations for people with special needs);
- service providers, e. g. for maintenance (small, medium and large enterprises);
- consumers (in case of machinery intended for use by consumers).

The above-mentioned stakeholder groups have been given the possibility to participate at the drafting process of this document.

The machinery concerned and the extent to which hazards, hazardous situations or hazardous events are covered are indicated in the Scope of this document.

When requirements of this type-C standard are different from those which are stated in type-A or type-B standards, the requirements of this type-C standard take precedence over the requirements of the other standards for machines that have been designed and built according to the requirements of this type-C standard.

The ISO 3691 series covers safety requirements and their verification for industrial trucks as defined in ISO 5053-1.

This document does not repeat all the technical rules which are state-of-the-art and which are applicable to the material used to construct the industrial truck. Reference will also need to be made to ISO 12100.

Industrial trucks — Safety requirements and verification —

Part 2: Self-propelled variable-reach trucks

1 Scope

This document gives safety requirements and the means for their verification for self-propelled industrial variable-reach trucks and variable-reach container handlers/reach stackers as defined in ISO 5053-1 (hereafter referred to as trucks), equipped with forks or integral load-handling devices for normal industrial duties (e.g. fork arms or means, such as spreaders, for handling containers).

This document does not apply to:

- rough-terrain variable-reach trucks,
- rough-terrain variable-reach trucks for handling containers,
- lorry mounted trucks covered by ISO 20297-1,
- machines designed primarily for earth-moving (e.g. loaders and dozers), even when their buckets and blades are replaced with forks,
- machines from which the load can swing freely in all directions.

This document is not applicable to trucks manufactured before the date of its publication.

For the purposes of this document, fork arms and integrated attachments are considered to be a part of the truck, whereas attachments/equipment/tools mounted on the load carrier or on the fork arms which are removable by the user are not. Nevertheless, for interchangeable equipment, which is assembled with the truck by the operator in order to change the function of, or attribute a new function to, the truck, this document does provide requirements for:

- the interface with the truck,
- protection of the operator in the normal operating position from crushing and shearing hazards,
- operating and maintenance instructions,
- load charts,
- marking,
- provision for transportation, and,
- indicator lights for attachments for lifting containers

Any regional requirements additional to the provisions of this document are addressed in EN 16307-2:2023 and ISO/TS 3691-8.

This document deals with all significant hazards, hazardous situations or hazardous events, as listed in [Annex B](#), with the exception of the following, relevant to the applicable machines when used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer.