



# SLOVENSKI STANDARD

## SIST EN 16307-5:2013

01-junij-2013

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### Vozila za talni transport - Varnostne zahteve in preverjanje - 5. del: Dodatne zahteve za vozila, ki jih poganja pešec

Industrial trucks - Safety requirements and verification - Part 5: Supplementary requirements for pedestrian-propelled trucks

Flurförderzeuge - Sicherheitstechnische Anforderungen und Verifizierung - Teil 5: Zusätzliche Anforderungen für Fußgängergeführte Flurförderzeuge

Chariots de manutention - Exigences de sécurité et vérification - Partie 5: Exigences supplémentaires pour les chariots à conducteur accompagnant

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Ta slovenski standard je istoveten z: EN 16307-5:2013

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#### **ICS:**

53.060            Industrijski tovornjaki            Industrial trucks

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 16307-5**

March 2013

ICS 53.060

English Version

## Industrial trucks - Safety requirements and verification - Part 5: Supplementary requirements for pedestrian-propelled trucks

Chariots de manutention - Exigences de sécurité et  
vérification - Partie 5: Exigences supplémentaires pour les  
chariots à conducteur accompagnant

Flurförderzeuge - Sicherheitstechnische Anforderungen  
und Verifizierung - Teil 5: Zusätzliche Anforderungen für  
mitgängerbetriebene Flurförderzeuge

This European Standard was approved by CEN on 10 February 2013.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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## Foreword

This document (EN 16307-5:2013) has been prepared 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 September 2013, and conflicting national standards shall be withdrawn at the latest by September 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

EN 16307, *Industrial trucks — Safety requirements and verification*, consists of the following parts:

- *Part 1: Supplementary requirements for self-propelled industrial trucks, other than driverless trucks, variable-reach trucks and burden-carrier trucks*
- *Part 2: Supplementary requirements for self-propelled variable-reach trucks*
- *Part 3: Supplementary requirements for trucks with elevating operator position and trucks specifically designed to travel with elevated loads*
- *Part 4: Supplementary requirements for driverless industrial trucks and their systems*
- *Part 5: Supplementary requirements for pedestrian-propelled trucks*
- *Part 6: Supplementary requirements for burden and personnel carriers*

This document is based on ISO/TS 3691-7, *Industrial trucks — Safety requirements and verification — Part 7: Regional requirements for countries within the European Community*, and is limited to pedestrian-propelled industrial trucks.

This document is to be used with EN ISO 3691-5, *Industrial trucks — Safety requirements and verification — Part 5: Pedestrian-propelled trucks (ISO 3691-5)*.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

**EN 16307-5:2013 (E)****0 Introduction****0.1 General**

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

The machines 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 EN 16307 series of standards covers safety requirements and their verification for industrial trucks, as defined in ISO 5053, that are not covered exhaustively by the EN ISO 3691 series.

**0.2 Assessment of hazards**

The product needs to be designed in such a way that it is fit for its purpose or function and can be adjusted and maintained without putting persons at risk when used under the conditions foreseen by the manufacturer.

In order to properly design a product and to cover all specific safety requirements, the manufacturer will have to identify the hazards that apply to his product and carry out a risk assessment. The manufacturer will then need to design and construct the product taking this assessment into account.

The aim of this procedure is to eliminate the risk of accidents throughout the expected lifetime of the machinery, including the phases of assembling and dismantling where risks of accidents could also arise from foreseeable abnormal situations.

In selecting the most appropriate methods, the manufacturer will need to apply the following principles, in the order given here:

- a) eliminate or reduce risks as far as possible by design (inherently safe machinery design and construction);
- b) take the necessary protective measures in relation to risks that cannot be eliminated by design;
- c) inform users of any shortcoming of the protective measures adopted;
- d) indicate whether any particular training is required;
- e) specify any need to provide personal protection equipment;
- f) refer to the appropriate user's document for proper operating instructions.

Industrial trucks need to be designed to prevent foreseeable misuse wherever possible if such misuse would engender risk. In other cases, the instructions will need to draw the user's attention to ways shown by experience in which the machinery ought not be used.

This part of EN 16307 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 EN ISO 12100.

## 1 Scope

This European Standard gives requirements for the types of industrial trucks specified in the scope of EN ISO 3691-5.

This European Standard is intended to be used in conjunction with EN ISO 3691-5. These requirements are supplementary to those stated in EN ISO 3691-5 with the addition of the following hazards:

- Electromagnetic compatibility (EMC);
- when operating in potentially explosive atmospheres.

This European standard partially replaces the following requirements of EN ISO 3691-5:

- Electrical requirements.

This European standard defines supplementary requirements to EN ISO 3691-5:

- protection against crushing, shearing and trapping;
- information for use (instruction handbook and marking).

Annex A (informative) contains the list of significant hazards covered by this standard.

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## 2 Normative references (standards.iteh.ai)

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

EN 953, *Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards*

EN 1175-1, *Safety of industrial trucks — Electrical requirements — Part 1: General requirements for battery powered trucks*

EN 1755, *Safety of industrial trucks — Operation in potentially explosive atmospheres — Use in flammable gas, vapour, mist and dust*

EN 12895, *Industrial trucks — Electromagnetic compatibility*

EN ISO 3691-5:2009, *Industrial trucks — Safety requirements and verification — Part 5: Pedestrian-propelled trucks (ISO 3691-5:2009)*

ISO 5053:1987, *Powered industrial trucks — Terminology*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5053:1987 and EN ISO 3691-5:2009 apply.

**EN 16307-5:2013 (E)****4 Safety requirements and/or protective measures****4.1 General**

The following applies to the pedestrian-propelled trucks, dealt with in EN ISO 3691-5. These are additional to the requirements of EN ISO 3691-5 and, in certain instances, replace them.

**4.2 Protection against crushing, shearing and trapping****4.2.1 General**

The requirements of EN ISO 3691-5:2009, 5.8 shall apply with the following additions:

Where fixed and/or removable guard systems are needed, the requirements of EN 953 shall be met.

When a fixed guard is removed, its fixing system shall remain on the guard or truck. This requirement applies to any fixed guards that are liable to be removed by the user with a risk of loss of the fixings, e.g. fixed guards that are liable to be removed during routine maintenance or setting operations carried out at the place of use.

**4.2.2 Pedestrian-propelled trucks with mast**

The mast shall be guarded on the side facing the operating controls, e.g. by a transparent cover. The guard shall, as a minimum, cover the whole width of the hazardous zone and the full length of the non-elevated mast, or up to 2,2 m from the ground, whichever is less.

**4.3 Electrical requirements**

(standards.iteh.ai)

Subclause 5.11.2, first paragraph of EN ISO 3691-5:2009 is replaced with the following:

- Electrical systems and equipment shall be in accordance with EN 1175-1.

**4.4 Electromagnetic compatibility (EMC)**

The truck's EMC shall comply with EN 12895.

**4.5 Operation in potentially explosive atmospheres**

Trucks operating in potentially explosive atmospheres shall comply with EN 1755.

**5 Verification of safety requirements and/or protective measures**

The requirements specified in Clause 4 shall be verified in accordance with the reference standards.

**6 Information for use****6.1 Instruction handbook(s) - Operation of truck**

The requirements of EN ISO 3691-5:2009, 7.2.3 shall apply with the following addition:

The instruction handbook(s) shall include, as applicable, the following:

- information about specific protective devices (e.g. protective screen) and their use.



## 6.2 Marking – Information plates

The requirements of EN ISO 3691-5:2009, 7.3.1 shall apply with the following modifications.

Replace EN ISO 3691-5:2009, 7.3.1.1 b) with the following:

- designation of the machinery, designation of series or type and the mandatory marking<sup>1)</sup>.

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1) For industrial trucks intended to be put on the market in the EEA, CE marking as defined in the applicable European directive(s), e.g. Machinery, Outdoor Noise and Explosive Atmospheres (ATEX).