



SLOVENSKI STANDARD SIST EN 1757-3:2003

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Safety of industrial trucks - Pedestrian controlled manual and semi-manual trucks - Part 3: Platform trucks

Sicherheit von Flurförderzeugen - Handbetriebene und teilweise handbetriebene Flurförderzeuge - Teil 3: Plattformwagen

Sécurité des chariots de manutention - Chariots a conducteur a pied manuels et semi-manuels - Partie 3: Chariots a plateau fixe

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Ta slovenski standard je istoveten z: EN 1757-3:2002

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ICS:

53.060 Industrijski tovornjaki Industrial trucks

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en

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EUROPEAN STANDARD

EN 1757-3

NORME EUROPÉENNE

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November 2002

ICS 53.060

English version

Safety of industrial trucks - Pedestrian controlled manual and semi-manual trucks - Part 3: Platform trucks

Sécurité des chariots de manutention - Chariots à conducteur à pied manuels et semi-manuels - Partie 3: Chariots à plateau fixe

Sicherheit von Flurförderzeugen - Handbetriebene und teilweise handbetriebene Flurförderzeuge - Teil 3: Plattformwagen

This European Standard was approved by CEN on 2 September 2002.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

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Foreword

This document EN 1757-3:2002 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 May 2003, and conflicting national standards shall be withdrawn at the latest by May 2003.

This European Standard is one of a series of European Standards for the safety of Industrial trucks. This series of standards includes:

EN 1175 *Safety of Industrial trucks - Electrical requirements for trucks*

Part 1: General requirement for battery powered trucks

Part 2: General requirements for internal combustion engine powered trucks

Part 3: Specific requirements for the electrical power transmission systems of internal combustion engine powered trucks

EN 1459 *Safety of industrial trucks - Self propelled variable reach trucks*

EN 1525 *Safety of industrial trucks - Driverless trucks and their systems*

EN 1526 *Safety of industrial trucks - Additional requirements for automated functions on trucks*

EN 1551 *Safety of industrial trucks - Self propelled trucks over 10 000 kg capacity*

EN 1726 *Safety of industrial trucks - Self propelled trucks up to and including 10 000 kg capacity and tractors with a drawbar pull up to and including 20 000 N*

Part 1: General requirements

Part 2: Additional requirements for trucks with elevating operator position and trucks specifically designed to travel with elevated loads

EN 1755 *Safety of industrial trucks - Operation in potentially hazardous atmospheres – Use in inflammable gas, vapour, mist and dust*

EN 1757 *Safety of industrial trucks - Pedestrian propelled trucks*

Part 1: Stacker trucks

Part 2: Pallet trucks

Part 3: Platform trucks

Part 4: Scissor lift pallet trucks

EN 12053 *Safety of industrial trucks - Test methods for measuring noise emissions*

EN 12895 *Safety of industrial trucks - Electromagnetic compatibility*

EN 13059 *Safety of industrial trucks - Test methods for measuring vibration*

prEN ISO 13564 *Safety of industrial trucks - Test methods for measuring visibility from self-propelled trucks (ISO/DIS 13564:1996)*

Annexes A and B are normative.

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According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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0 Introduction

This European Standard is a type C standard as stated in EN 1070.

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

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

With the aim of clarifying the intention of the standard and avoiding doubts when reading it, the following assumptions were made when producing it:

- only competent persons operate the machine;
- components without specific requirements are designed in accordance with usual engineering practice and calculation code, including all failure modes.

1 Scope

1.1 This European Standard applies to pedestrian propelled industrial platform trucks as defined in clause 3.1 with a rated capacity up to and including 1 000 kg, hereinafter referred to as "trucks" and designed for general purposes.

1.2 This standard does not apply to: [SIST EN 1757-3:2003](https://standards.iteh.ai/catalog/standards/sist/9c266f82-3a37-438f-a03f-11228973931c/en-1757-3-2002)

- shopping trolleys referred to in EN 1929 Parts 1 to 6 (CEN/TC 291);
- roll containers referred to in EN 12674 Parts 1 to 4 (CEN/TC 261);
- trucks that are intended to be towed by powered vehicles.

1.3 This standard deals with the technical requirements to minimise the hazards listed in clause 4 which can arise during commissioning, operation and maintenance of trucks when carried out in accordance with the specifications as intended by the manufacturer.

1.4 This standard does not establish the additional requirements for:

- operation in severe conditions (e.g. extreme environmental conditions such as: freezer applications, high temperatures, corrosive environment);
- operation subject to special rules (e.g. potentially explosive atmospheres);
- handling of loads the nature of which could lead to dangerous situations (e.g. molten metal, acids/alkalies, radiating materials, specially brittle loads);
- hazards occurring during construction, transportation, decommissioning and disposal;
- direct contact with foodstuffs;

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- operation on gradients or on surfaces other than smooth, level, hard surfaces;
 - trucks designed for special applications : trucks used in hospitals, dinner, trolley;
 - trucks fitted with hinged or sliding doors.
- 1.5** Other possible limitations of the scope of other standards referred to that also apply to this standard.
- 1.6** Hazards relevant to noise, vibration, visibility and static electricity are not dealt with in this standard.
- 1.7** This standard applies to trucks manufactured after the date of issue.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 1050:1996, *Safety of machinery - Principles for risk assessment*.

EN 1726-1:1998, *Safety of industrial trucks - Self-propelled trucks up to and including 10 000 kg capacity and industrial tractors with a drawbar pull up to and including 20 000 N - Part 1: General requirements*.

EN 12532, *Castors and wheels - Castors and wheels for applications up to 1,1 m/s (4 km/h)*.

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3 Terms and definitions

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

3.1**pedestrian propelled industrial platform truck**

industrial truck with at least 3 wheels and fitted with a non-lifting load-carrying platform and possibly with one or several shelves. The truck is designed to be manually, pushed, pulled and steered by a pedestrian operator by means of a bar or tiller handle to move loads from one place to another one on a smooth, level, hard surface. Loading and unloading may be manual or by external mechanical means

3.2**rated capacity**

load in kilograms given by the manufacturer, the truck can transport under intended operation. The rated capacity is defined for a load uniformly and equally distributed over the load carrying platform and the shelves if any. The centre of gravity of the load on each level shall be on the centre line of the truck and 200 mm above the geometrical centre of the platform or the shelf

3.3**intended operating position**

position in which the operator may control all operational functions as intended by the manufacturer

3.4**intended operation**

the use for which the truck is designed according to the manufacturer's instructions

3.5**operator**

designated person, suitably trained (see EN ISO 9001:2000 clause 4.18) qualified by knowledge and practical experience, and provided with the necessary instructions to enable the required (operation, test and/or examination) to be carried out safely

4 List of hazards

The following hazards from annex A of EN 1050:1996 are applicable in the situations described and could involve risks to persons if not reduced or eliminated. The corresponding requirements are designed to limit the risk or reduce these hazards in each situation.

Hazards		Corresponding requirements	
4.1	MECHANICAL HAZARDS		
4.1.1	Crushing	5.2	Propelling, steering
		5.3.2	Wheel guards
		5.4	Parking brake
		5.5	Stability
		5.6	Protection against crushing and shearing points
		6.2.2	Structural test
4.1.2	Shearing	5.6	Protection against crushing and shearing points
		5.7	Edges and angles
4.1.3	Impact	5.2	Propelling, steering
		5.7	Edges and angles
4.1.4	Friction or abrasion	5.2	Propelling, steering
4.1.5	Loss of stability	5.5	Stability
4.2	HAZARDS GENERATED BY NEGLECTING ERGONOMIC PRINCIPLES		
4.2.1	Unhealthy postures or excessive efforts	5.1	Design and construction forces for truck
		5.2	Propelling, steering
		7	Information for use

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4.2.2	Inadequate consideration of hand-arm or foot-leg anatomy	5.2	Propelling, steering
4.2.3	Neglected use of personal protection equipment	7	Information for use
4.3	HAZARDS DUE TO FAILURES	5.3	Wheels and castors
4.4	ADDITIONAL HAZARDS DUE TO MOBILITY	6.2.2	Structural test
4.4.1	Insufficient ability of machinery to remain immobilised	5.4	Parking brake Information for use
4.4.2	Contact with the wheels	5.2.2	Tiller
4.4.3	Impact	5.3.2	Wheel guards
		5.7	Edges and angles
		7	Information for use
4.5	FALLING OF LOADS HAZARD	7	Information for use
4.6	HAZARD COMBINATIONS		Covering each individual hazard is sufficient for covering combinations of hazards

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5 Requirements

5.1 Design and construction forces for truck

The design and construction of the truck shall be such that the maximum forces required for truck function (propelling, steering) shall not exceed the values given in Table 1 below (see 6.2.3).

Table 1 - Maximum allowed forces

TEST LOAD	PROPELLING		STEERING
	STARTING	ROLLING	
kg	N	N	N
250	150	75	150
500	200	100	200
750	250	150	250
1 000	300	200	300

NOTE The values in Table 1 are pure design values for the truck and should not be confused with actual operating forces in the work place (see 7.1.3).

5.2 Propelling, steering

5.2.1 Push/pull handle(s) either vertical or horizontal and/or a tiller shall be provided to allow an operator to push, pull and steer the truck.

5.2.2 Tiller

The tiller shall be provided with a handle of the closed loop type or otherwise designed to ensure lateral protection of the operator's hands.

The hand grips shall be of a cross section enclosed within the space between two concentric circles of 25 mm inside diameter and 35 mm outside diameter and provide a minimum span of 100 mm for each hand.

The upper part of the tiller handle shall conform to the dimensions shown in Figure 1 and Figure 2.

When pulling the horizontal distance between the end of the tiller and the front of the wheel (Figure 2) shall be more than 500 mm, the handle axis being positioned within 700 mm to 1 000 mm height.

The tiller shall automatically and gently return to the upper rest position when released.