ICS 53.060 SLOVENSKÁ TECHNICKÁ NORMA Február 2022

STN	**Priemyselné vozíky Požiadavky na bezpečnosť a overovanie Časť 6: Nákladné a osobné vozíky s pevnou plošinou (ISO 3691-6: 2021)**	**STN EN ISO 3691-6** 26 8811

Industrial trucks - Safety requirements and verification - Part 6: Burden and personnel carriers (ISO 3691-6:2021)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/22

Obsahuje: EN ISO 3691-6:2021, ISO 3691-6:2021

Oznámením tejto normy sa ruší
STN EN ISO 3691-6 (26 8811) z februára 2016

134196

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 3691-6

October 2021

ICS 53.060; C

Supersedes EN ISO 3691-6:2015, EN ISO 3691-6:2015/AC:2016

English Version

Industrial trucks - Safety requirements and verification - Part 6: Burden and personnel carriers (ISO 3691-6:2021)

Chariots de manutention - Exigences de sécurité et vérification - Partie 6: Transporteurs de charges et de personnel (ISO 3691-6:2021)

Flurförderzeuge - Sicherheitstechnische Anforderungen und Verifizierung - Teil 6: Lasten- und Personentransportfahrzeuge (ISO 3691-6:2021)

This European Standard was approved by CEN on 11 August 2021.

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

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Ref. No. EN ISO 3691-6:2021 E

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European foreword

This document (EN ISO 3691-6:2021) has been prepared by Technical Committee ISO/TC 110 "Industrial trucks" in collaboration with 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of an identical text or by endorsement, at the latest by April 2022, and conflicting national standards shall be withdrawn at the latest by April 2022.

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

This document supersedes EN ISO 3691-6:2015 and EN ISO 3691-6:2015/AC:2016.

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

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

Any feedback and questions on this document should be directed to the users’ national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 3691-6:2021 has been approved by CEN as EN ISO 3691-6:2021 without any modification.

Annex ZA
(informative)

Relationship between this European Standard and the essential requirements of Directive 2006/42/EC aimed to be covered

This European Standard has been prepared under a Commission's standardization request "M/396 Mandate to CEN and CENELEC for Standardisation in the field of machinery" to provide one voluntary means of conforming to essential requirements of Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery, and amending Directive 95/16/EC (recast).

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding essential requirements of that Directive, and associated EFTA regulations.

Table ZA.1 — Correspondence between this European Standard and Annex I of Directive 2006/42/EC

The relevant Essential Requirements of Directive 2006/42/EC	**Clause(s)/sub-clause(s) of this EN**	**Remarks/Notes**
		To cover all the relevant safety requirements for the products(s) in its scope, this standard (providing global requirements and references to regional requirements for a machine) has to be applied together with one of those standards as specified in the scope (providing European regional requirements for a machine).
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1.1.3. Materials and products	4.1, 4.5	
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1.1.5. Design of machinery to facilitate its handling	4.11, 6.2, 6.3	
1.1.6 Ergonomics	4.6	
1.1.7. Operating positions	4.5.1, 4.10, 6.2, 6.3	
1.1.8. Seating	4.6.3	
1.2.1. Safety and reliability of		not covered

The relevant Essential Requirements of Directive 2006/42/EC	**Clause(s)/sub-clause(s) of this EN**	**Remarks/Notes**
control systems		
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1.2.4.1. Normal stop		not covered
1.2.4.2. Operational stop		not covered
1.2.4.3. Emergency stop	,	not covered
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1.3.9. Risks of uncontrolled movements		not covered
1.4.1. General requirements		not covered
1.4.2.1. Fixed guards		not covered
1.4.2.2. Interlocking movable guards		not covered
1.4.3. Special requirements for protective devices		not covered
1.5.1. Electricity supply		not covered
1.5.2. Static electricity		not covered

The relevant Essential Requirements of Directive 2006/42/EC	Clause(s)/sub-clause(s) of this EN	Remarks/Notes
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The relevant Essential Requirements of Directive 2006/42/EC	**Clause(s)/sub-clause(s) of this EN**	**Remarks/Notes**
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3.4.4. Falling objects		not covered
3.4.5. Means of access		not covered
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The relevant Essential Requirements of Directive 2006/42/EC	**Clause(s)/sub-clause(s) of this EN**	**Remarks/Notes**
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3.6.3. Instructions	6	
3.6.3.1. Vibrations		not covered

WARNING 1 — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

INTERNATIONAL STANDARD

ISO 3691-6

Second edition
2021-07

Industrial trucks — Safety requirements and verification —

Part 6: Burden and personnel carriers

Chariots de manutention — Exigences de sécurité et vérification —

Partie 6: Transporteurs de charges et de personnel

Reference number
ISO 3691-6:2021(E)

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Published in Switzerland

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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 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 3691-6:2013), which has been technically revised.

The main changes compared to the previous edition are as follows:

— the Introduction has been modified;

— throughout the document, old references to ISO 5053 have been updated to ISO 5053-1 and references to ISO/TS 3691-7 to EN 16307-6;

— in 4.7, the stability requirements have been changed to ISO 22915-17;

— in 4.6.3.1, the range for weight adjustment of the seat has been changed to "52 kg to 114 kg";

— in 4.6.3.3, the requirements for restraints and handholds have been clarified;

— in 6.2.2.1, list item t) has been added;

— in 6.2.5, the old requirement has been replaced by a reference to regional requirements outside Europe in ISO/TS 3691-8.

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.

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 to ISO 12100 is also necessary.

Structure

An important step forward in the work on the ISO 3691 series was the agreement to issue a new structure of International Standards for industrial trucks having on one side basic standards for all kinds of trucks and on the other side independent standards to cover the respective specific functions of industrial trucks, e.g. visibility, noise, vibration, electrical requirements, etc.

Global relevance

From the beginning, the task of the working group was to revise ISO 3691:1980 and establish worldwide basic standards to align with the major regulations in, for example, the European Union, Japan, Australia and North America.

Every effort was made to develop a globally relevant International Standard. That goal was achieved with most of the issues. For several potential problem areas, compromises were needed and will be needed in the future. Where divergent regional requirements remain, these are addressed by the EN 16307 series and ISO/TS 3691-8:2019.

INTERNATIONAL STANDARD **ISO 3691-6:2021(E)**

Industrial trucks — Safety requirements and verification —

Part 6: Burden and personnel carriers

1 Scope

This document gives safety requirements and the means for their verification for self-propelled carriers designed for carrying burdens without lifting, as defined in ISO 5053-1:2020, and/or personnel carriers, having three or more wheels, a maximum speed not exceeding 56 km/h and a load capacity not exceeding 5 000 kg (hereafter referred to as carriers or trucks).

This document is applicable to trucks equipped with a platform (which can be tilting) for the purpose of carrying materials or with a number of seats for the purpose of transporting passengers.

It is not applicable to:

— vehicles intended primarily for earth-moving or over-the-road hauling;

— driverless trucks;

— pedestrian controlled trucks;

— golf cars;

— tractors with a drawbar pull up to and including 20 000 N equipped with a platform for the purpose of carrying materials.

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

This document does not deal with hazard due to the risk of break-up during operation.

It does not establish requirements for hazards that can occur when using trucks on public roads or when operating in potentially explosive atmospheres.

It does not establish requirements to provide fire extinguishers.

Regional requirements, additional to the requirements given in this document, are addressed in EN 16307-6:2014 and ISO/TS 3691-8:2019.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 2867:2011, *Earth-moving machinery — Access systems*

ISO 3287:1999, *Powered industrial trucks — Symbols for operator controls and other displays*

ISO 3411:2007, *Earth-moving machinery — Physical dimensions of operators and minimum operator space envelope*

ISO 3795:1989, *Road vehicles, and tractors and machinery for agriculture and forestry — Determination of burning behaviour of interior materials*

ISO 5010:2019, *Earth-moving machinery — Rubber-tyred machines — Steering requirements*

ISO 5053-1:2020, *Industrial trucks — Vocabulary — Part 1: Types of industrial trucks*

ISO 6292:2020, *Powered industrial trucks and tractors — Brake performance and component strength*

ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction*

ISO 13564-1:2012, *Powered industrial trucks — Test methods for verification of visibility — Part 1: Sit-on and stand-on operator trucks and variable-reach trucks up to and including 10 t capacity*

ISO 13849-1:2006, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design*

ISO 15870:2000, *Powered industrial trucks — Safety signs and hazard pictorials — General principles*

ISO 20898:2008, *Industrial trucks — Electrical requirements*

ISO 21281:2005, *Construction and layout of pedals of self-propelled sit-down rider-controlled industrial trucks — Rules for the construction and layout of pedals*

ISO 24135-1:2006, *Industrial trucks — Specifications and test methods for operator restraint systems — Part 1: Lap-type seat belts*

ISO 22915-17:2020, *Industrial trucks — Verification of stability — Part 17: Towing tractors, burden and personnel carriers*

