



Nederlandse norm

NEN-EN 1493+A1

(en)

Hefbruggen voor voertuigen

Vehicle lifts

Vervangt NEN-EN 1493:1998;
NEN-EN 1493:1998/Ontw. A1:2008;
NEN-EN 1493:2008 Ontw.

ICS 43.180; 53.020.99

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Voorbeeld
 Preview

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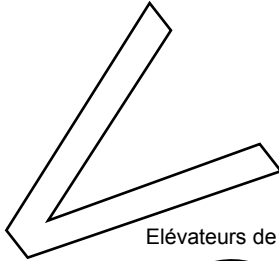
Voor de in deze norm vermelde normatieve verwijzingen bestaan in Nederland de volgende equivalenten:

<u>vermelde norm</u>	<u>Nederlandse norm</u>	<u>titel</u>
EN 414:1992	NEN-EN 414:1994	Veiligheid van machines - Regels voor het opstellen en de presentatie van veiligheidsnormen
EN 954-1:1996	NEN-EN 954-1:1997	Veiligheid van machines - Onderdelen van besturingssystemen met een veiligheidsfunctie - Deel 1: Algemene ontwerpbeginselen
EN 982:1996	NEN-EN 982:1996+A1:2008	Veiligheid van machines - Veiligheidseisen voor hydraulische en pneumatische systemen en hun componenten - Hydrauliek
EN 983:1996	NEN-EN 983:1997+A1:2008	Veiligheid van machines - Veiligheidseisen voor hydraulische en pneumatische systemen en hun onderdelen - Pneumatiek
EN 1760-2	NEN-EN 1760-2	Veiligheid van machines - Drukgevoelige beschermingsvoorzieningen - Deel 2: Algemene principes voor het ontwerp en beproeving van drukgevoelige lijsten en stangen
EN 10025:1990	NEN-EN 10025:1993	Warmgewalste producten van ongelegeerd constructiestaal - Technische leveringsvoorwaarden (bevat wijzigingsblad A1:1993)
EN 60204-1:1992	NEN-EN 60204-1:1995	Veiligheid van machines - Elektrische uitrusting van machines - Deel 1: Algemene eisen
EN 60529:1992	NEN 10529:1992	Beschermingsgraden van omhulsels van elektrisch materieel (IP-codering)
EN 60947-5-1:1991	NEN-EN-IEC 60947-5-1:2004	Laagspanningsschakelaars - Deel 5-1: Stuurstroomkringen en schakelelementen - Sectie 1: Elektromechanische stuurstroomkringen
EN ISO 12100-1:2003	NEN-EN-ISO 12100-1:2003	Veiligheid van machines - Basisbegrippen, algemene ontwerpbeginselen - Deel 1: Basisterminologie, methodologie
EN ISO 12100-2:2003	NEN-EN-ISO 12100-2:2003	Veiligheid van machines - Basisbegrippen, algemene ontwerpbeginselen - Deel 2: Technische beginselen
EN ISO 13850:2008	NEN-EN-ISO 13850:2008	Veiligheid van machines - Noodstop - Ontwerpbeginselen

Voorbeeld
Preview

ICS 43.180; 53.020.99

Supersedes EN 1493:1998



Elévateurs de véhicules

English Version

Vehicle lifts

Fahrzeug-Hebebühnen

This European Standard was approved by CEN on 10 July 1998 and includes Amendment 1 approved by CEN on 9 November 2008.

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Preview



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Foreword

This document (EN 1493:1998+A1:2008) has been prepared by Technical Committee CEN/TC 98 "Lifting platforms", the secretariat of which is held by DIN.

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 June 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

This document includes Amendment 1, approved by CEN on 2008-11-09.

This document supersedes EN 1493:1998.

The start and finish of text introduced or altered by amendment is indicated in the text by tags $\boxed{A1}$ $\boxed{A1}$.

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).

$\boxed{A1}$ For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document. $\boxed{A1}$

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Introduction

The object of this European Standard is to define rules for safeguarding persons against the risk of accidents associated with the operation of vehicle lifts.

While elaborating this standard it was assumed that only trained persons operate the vehicle lifts and that the working area is sufficiently lit. Furthermore it was assumed that no persons are permitted to stand under the vehicle during lifting and lowering.

The requirement concerning loading control is not deemed pertinent to this standard insofar as:

- Experience and the state of the art suggests that failing to observe this requirement has not historically given rise to unsafe situations;
- Such devices which would give protection against overall and local overloading are not currently available in forms which cover all eventualities;
- The weight and weight distribution is freely available for the type of vehicles to be lifted and as such it is the responsibility of the user to prevent an unsafe situation arising;
- Vehicle lifts are generally designed to suit the maximum weight of vehicle to which it would reasonably be subjected, hence the normal duty of a lift is substantially lower than the maximum.

The extent to which hazards are covered is indicated in the scope of this standard. ^{A1)} In addition, machinery should comply as appropriate with EN ISO 12100-1 and EN ISO 12100-2 for hazards which are not covered by this European Standard.

1 Scope

This standard applies to stationary, mobile and movable vehicle lifts, which are not intended to lift persons but which are designed to raise vehicles totally, for the purpose of examining and working on or under the vehicles whilst in a raised position. The vehicle lift may consist of one or more lifting units.

Power supply to the vehicle lift by internal combustion engines is not considered. The floor or ground supporting the vehicle lift in use is assumed to be horizontal.

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 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 applies.

^{A1)} *deleted text* ^{A1)}

EN 414:1992, *Safety of machinery — Rules for drafting and presentation of safety standards*

^{A1)} *deleted text* ^{A1)}

EN 1493:1998+A1:2008 (E)

EN 954-1:1996, *Safety of machinery — Safety related parts of control systems — Part 1: General principles for design*

EN 982:1996, *Safety requirements for fluid power systems and components — Hydraulics*

EN 983:1996, *Safety requirements for fluid power systems and components — Pneumatics*

EN 1760-2 (A1), *Safety of machinery — Pressure sensitive protective devices — Part 2: General principles for the design and testing of pressure sensitive edges and bars*

EN 10025:1990, *Hot-rolled products of non-alloy structural steels — Technical delivery conditions*

EN 60204-1:1992, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements*

EN 60529:1992, *Degrees of protection provided by enclosures*

EN 60947-5-1:1991, *Low-voltage switchgear and controlgear — Part 5-1: Control circuit devices and switching elements — Electromechanical control circuit devices*

EN ISO 12100-1:2003, *Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology (ISO 12100-1:2003)*

EN ISO 12100-2:2003, *Safety of machinery — Basic concepts, general principles for design — Part 2: Technical principles (ISO 12100-2:2003)*

EN ISO 13850:2008, *Safety of machinery — Emergency stop — Principles for design (ISO 13850:2006) (A1)*

3 Definitions

For the purposes of this standard the following definitions apply:

3.1 vehicle lift
Lifting device with guided load carrying device for lifting land based means of transport such as cars, motorcycles, lorries, buses, trams, rail vehicles, industrial trucks and similar, in the following named vehicle, and designed for working on or under the load. The guidance of the load carrying device is given by the supporting structure.

A vehicle lift may have the ability to tilt the load carrying device about a horizontal axis parallel to or perpendicular to the main axis of the lifted vehicle.

The following types of vehicle lift are examples of those covered by this definition: single and multi-column lifts, single and multi-cylinder lifts, mobile column lifts, scissor and parallelogram lifts, short stroke lifts, which support vehicle wheels, chassis or other designated lifting points (see Annex B (informative)).

NOTE Short stroke lifts are floor mounted vehicle lifts with a maximum vertical travel of not more than 500 mm, which are not designed for working under the raised load.

3.2 manually driven vehicle lift
vehicle lift where the load carrying device is driven by manual effort

3.3 power driven vehicle lift
vehicle lift where the load carrying device is not driven by manual effort

3.4**fixed vehicle lift**

vehicle lift fixed permanently to its location

3.5**movable vehicle lift**

vehicle lift which can fulfil its function without being fixed to the floor and may be designed to be transportable

3.6**mobile vehicle lift**

movable vehicle lift equipped with wheels, rollers etc. such that it can be moved from one place to another with or without load

3.6.1**manually mobile vehicle lift**

mobile vehicle lift which is moved by manual effort alone

3.6.2**vehicle lift with powered mobility**

mobile vehicle lift which is not moved by manual effort

3.7**initial position**

lower limit position of the carrying device

3.8**rated load**

maximum load that a lift has been designed to carry

3.9**load carrying device**

Part(s) of the vehicle lift which supports the load either by direct contact with the vehicle or through contact with pick-up plates or pads.

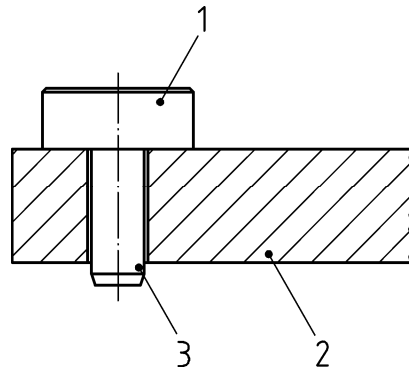
Load carrying devices include tracks, carrying arms or other mechanical devices designed to raise and support a vehicle by designated lifting points.

3.10**carrying arm**

Load carrying device attached at one end, directly or indirectly to the lifting element and supporting the load at its other end. Carrying arms are usually used on two column lifts.

3.11**pick-up plate**

part of the load carrying device, e.g. on two column lifts with carrying arms, which has direct contact to the vehicle and which has an assigned position on the load carrying device (see figure 1)

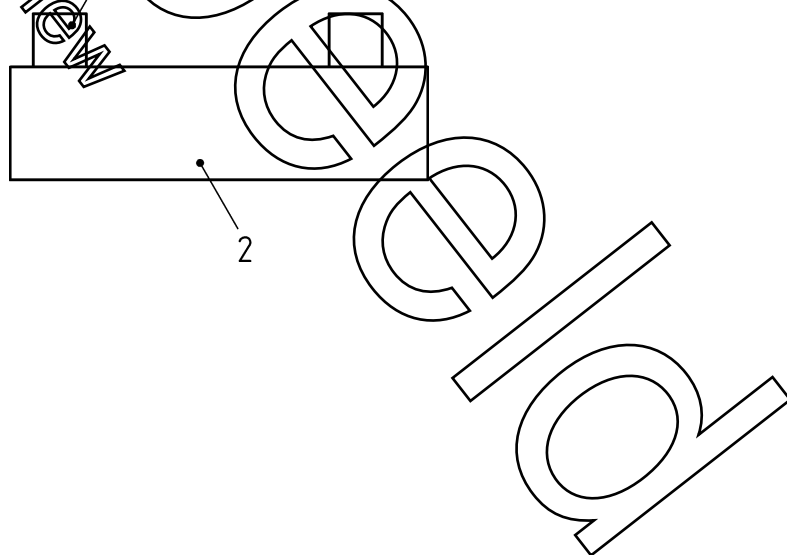
**Key**

- 1 pick-up plate
- 2 load carrying device
- 3 pin

Figure 1 — Pick-up plate

3.12 pick-up pad

vehicle supporting pad which has direct contact with the vehicle but which does not have an assigned position, e.g. pads used on wheel free systems with platforms (see figure 2)

**Key**

- 1 pick-up pad
- 2 platform

Figure 2 — Pick-up pad

3.13 lifting element

Medium through which the force is transmitted from the power source to the load carrying device. Lifting elements include hydraulic and pneumatic cylinders, lead screw and nut systems as well as any flexible connections such as steel wire ropes and chains.

Bestelformulier

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