

**Õhusõidukite maapealsed teenindusseadmed.  
Erinõuded. Osa 9: Konteinerite/aluste laadimisseadmed**

**Aircraft ground support equipment - Specific  
requirements – Part 9: Container/Pallet loaders**

## EESTI STANDARDI EESSÕNA

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See Eesti standard EVS-EN 12312-9:2013 sisaldab Euroopa standardi EN 12312-9:2013 ingliskeelset teksti.	This Estonian standard EVS-EN 12312-9:2013 consists of the English text of the European standard EN 12312-9:2013.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
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English Version

## Aircraft ground support equipment - Specific requirements - Part 9: Container/Pallet loaders

Matériel au sol pour aéronefs - Exigences particulières -  
Partie 9 : Chargeurs de conteneurs/palettes

Luftfahrt-Bodengeräte - Besondere Anforderungen - Teil 9:  
Container-/Paletten-Hubfahrzeuge

This European Standard was approved by CEN on 24 November 2012.

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## Foreword

This document (EN 12312-9:2013) has been prepared by Technical Committee CEN/TC 274 "Aircraft ground support equipment", 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of an identical text or by endorsement, at the latest by July 2013, and conflicting national standards shall be withdrawn at the latest by July 2013.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 supersedes EN 12312-9:2005+A1:2009.

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 EC Directive 2006/42/EC on machinery.

For relationship with EU Directives, see informative Annex ZA, which is an integral part of this document.

EN 12312, *Aircraft ground support equipment — Specific requirements*, consists of the following parts:

- *Part 1: Passenger stairs;*
- *Part 2: Catering vehicles;*
- *Part 3: Conveyor belt vehicles;*
- *Part 4: Passenger boarding bridges;*
- *Part 5: Aircraft fuelling equipment;*
- *Part 6: Deicers and deicing/antiicing equipment;*
- *Part 7: Air-craft movement equipment;*
- *Part 8: Maintenance stairs and platforms;*
- *Part 9: Container/Pallet loaders (the present document);*
- *Part 10: Container/Pallet transfer transporters;*
- *Part 11: Container/Pallet dollies and loose load trailers;*
- *Part 12: Potable water service equipment;*
- *Part 13: Lavatory service equipment;*
- *Part 14: Disabled/incapacitated passenger boarding vehicles;*
- *Part 15: Baggage and equipment tractors;*
- *Part 16: Air start equipment;*

- *Part 17: Air conditioning equipment;*
- *Part 18: Nitrogen or Oxygen units;*
- *Part 19: Aircraft jacks, axle jacks and hydraulic tail stanchions;*
- *Part 20: Electrical ground power units.*

The main changes compared to the previous edition are:

- a) Amendment A1:2009 was incorporated;
- b) the Introduction was updated;
- c) the Scope was updated;
- d) Clause 2, Normative references, was updated;
- e) three terms and definitions were added, one was deleted;
- f) List of hazards was moved to Annex A, thus making it necessary to re-number the following Annex;
- g) 5.1, 5.2, 5.3 and 5.4 were changed;
- h) 5.5, Access, was inserted, thus making it necessary to re-number the following subclauses;
- i) 5.7 to 5.10, 5.13 and 5.15 were changed;
- j) 5.14, Safeguards against falling, was inserted, thus making it necessary to re-number the following subclauses;
- k) Clause 6 and 7 were changed;
- l) Annex B, Examples of different loaders, was deleted;
- m) Annex C was changed;
- n) Annex D, Typical data for loading equipment, was deleted;
- o) Annex ZA referring to the Machinery directive 98/37/EC was replaced by Annex ZA referring to the new Machinery directive 2006/42/EC;
- p) the Bibliography was updated.

According to the CEN/CENELEC Internal Regulations, the national standards organisations 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.

## Introduction

This European Standard specifies health and safety requirements for container/pallet loaders intended for loading/unloading of unit loads with the exception of bulk material for all aircraft types commonly in service in civil air transport.

The minimum essential criteria are considered to be of primary importance in providing safe, serviceable, economical and practical container/pallet loaders. Deviations from the recommended criteria should occur only after careful consideration, extensive testing, risk assessment and thorough service evaluation have shown alternative methods or conditions to be satisfactory. Such deviations are outside the scope of this standard and a manufacturer should be able to demonstrate an equivalent level of protection.

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

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. Deviations from requirements do not fall within the presumption of conformity given by the standard.

For information, a summary of equipment functional design requirements covered by International Standards, e.g. ISO 6967 and ISO 6968, and IATA Airport Handling Manual, is given in Annex B.

## 1 Scope

This European Standard specifies the technical requirements to minimise the hazards listed in Clause 4 which can arise during the commissioning, the operation and the maintenance of container/pallet loaders when used as intended, including misuse reasonably foreseeable by the manufacturer, when carried out in accordance with the specifications given by the manufacturer or his authorised representative. It also takes into account some requirements recognised as essential by authorities, aircraft and ground support equipment (GSE) manufacturers as well as airlines and handling agencies.

This document applies to:

- a) Container/Pallet loader (self-propelled) single platform;
- b) Container/Pallet loader (self-propelled) two or more platforms;
- c) Container/Pallet loader/transporter (self-propelled);
- d) Container/Pallet loader/transfer platform (towed).

This document does not establish requirements for noise and vibration.

NOTE 1 EN 1915-3 and EN 1915-4 provide the general GSE noise and vibration requirements.

This standard does not deal with hazards in respect to a standard automotive chassis and from other vehicles on the apron.

This part of EN 12312 is not applicable to container/pallet loaders which are manufactured before the date of publication of this standard by CEN.

NOTE 2 Certain measurements have been given in imperial units (in parentheses) following the metric measurements since the containers/pallets to be handled are based mainly on the imperial system.

This part of EN 12312 when used in conjunction with EN 1915-1, EN 1915-2, EN 1915-3 and EN 1915-4 provides the requirements for container/pallet loaders.

## 2 Normative references

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 1837, *Safety of machinery — Integral lighting of machines*

EN 1915-1:2013, *Aircraft ground support equipment — General requirements — Part 1: Basic safety requirements*

EN 1915-2, *Aircraft ground support equipment — General requirements — Part 2: Stability and strength requirements, calculations and test methods*

EN 1915-3, *Aircraft ground support equipment — General requirements — Part 3: Vibration measurement methods and reduction*

EN 1915-4, *Aircraft ground support equipment — General requirements — Part 4: Noise measurement methods and reduction*

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

EN ISO 13849-1:2008, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design (ISO 13849-1:2006)*



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

EN ISO 13857, *Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857)*

EN ISO 14122-1:2001, *Safety of machinery — Permanent means of access to machinery — Part 1: Choice of fixed means of access between two levels (ISO 14122-1:2001)*

ISO 2328, *Fork-lift trucks — Hook-on type fork arms and fork arm carriages — Mounting dimensions*

ISO 3864 (all parts), *Graphical symbols — Safety colours and safety signs*

DIN 51130:2004, *Testing of floor coverings — Determination of the anti-slip property — Workrooms and fields of activities with slip danger, walking method — Ramp test*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 12100:2010 and EN 1915-1:2013 and the following apply.

#### 3.1

##### **loader**

vehicle having a prime purpose of lifting, lowering and transferring unit load devices (ULD's), also known as an elevator

#### 3.2

##### **single platform loader**

loader which only has a single lifting platform

#### 3.3

##### **two platforms loader**

loader having a front platform and a main platform

#### 3.4

##### **multiple platforms loader**

either two platforms, or three platforms loader

#### 3.5

##### **main platform**

load bearing device which interfaces with the aircraft on a single platform loader or with the front platform of a two platforms loader, and with ground transportation systems

#### 3.6

##### **front platform**

load bearing device which interfaces with the aircraft on a two platforms loader, also known as a transfer platform or bridge

#### 3.7

##### **intermediate platform**

on a three platform loader, platform that shuttles between the main and front platforms

#### 3.8

##### **lower deck**

aircraft compartment below the main deck

#### 3.9

##### **main deck**

aircraft deck on which the major portion of the payload is carried