

**Õhusõidukite maapealsed teenindusseadmed .
Üldnõuded. Osa 2: Stabiilsuse ja tugevusnõuded,
arvutused ja katsemeetodid**

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

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1915-2:2001+A1:2009 sisaldab Euroopa standardi EN 1915-2:2001+A1:2009 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 30.04.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 25.03.2009.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 1915-2:2001+A1:2009 consists of the English text of the European standard EN 1915-2:2001+A1:2009.

This standard is ratified with the order of Estonian Centre for Standardisation dated 30.04.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

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ICS 49.100

Võtmesõnad:

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EUROPEAN STANDARD

EN 1915-2:2001+A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Supersedes EN 1915-2:2001

English Version

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

Matériel au sol pour aéronefs - Exigences générales -
Partie 2: Prescriptions de stabilité et de résistance
mécanique, calculs et méthodes d'essai

Luftfahrt-Bodengeräte - Allgemeine Anforderungen - Teil 2:
Stand sicherheits- und Festigkeitsanforderungen,
Berechnungen und Prüfverfahren

This European Standard was approved by CEN on 6 January 2001 and includes Amendment 1 approved by CEN on 15 February 2009.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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Annex ZB (informative) **A1** Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC **A1** 29

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Foreword

This document (EN 1915-2:2001+A1:2009) 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 September 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

This document includes Amendment 1, approved by CEN on 2009-02-15.

This document supersedes EN 1915-2:2001.

The start and finish of text introduced or altered by amendment is indicated in the text by tags $\boxed{A_1}$ $\boxed{A_1}$.

This European Standard 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).

$\boxed{A_1}$ For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document. $\boxed{A_1}$

EN 1915 - Aircraft ground support equipment - General requirements consists of:

Part 1: Basic safety requirements

Part 2: Stability and strength requirements, calculations and test methods

Part 3: Vibration measurement methods

Part 4: Noise measurement methods.

A further European Standard (EN 12312) in several parts covering specific requirements for different aircraft ground support equipment is in preparation.

The parts of EN 12312 - Aircraft ground support equipment - Specific requirements are:

Part 1: Passenger stairs	Part 12: Potable water service equipment
Part 2: Catering vehicles	Part 13: Lavatory service equipment
Part 3: Conveyor belt vehicles	Part 14: Disabled/Incapacitated passenger boarding equipment
Part 4: Passenger boarding bridges	Part 15: Baggage and equipment tractors
Part 5: Aircraft fuelling equipment	Part 16: Air start equipment
Part 6: Deicers and deicing/antiicing equipment	Part 17: Air conditioning equipment
Part 7: Aircraft movement equipment	Part 18: Oxygen/Nitrogen units
Part 8: Maintenance stairs and platforms	Part 19: Aircraft jacks, axle jacks and hydraulic tail stanchions
Part 9: Container/Pallet loaders	Part 20: Ground power equipment.
Part 10: Container/Pallet transfer transporters	
Part 11: Container/Pallet dollies and loose load Trailers	

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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Introduction

The abbreviation GSE means a complete item of aircraft ground support equipment in the context of this European Standard.

When compiling this European Standard it was assumed that:

- components without specific requirements are:
 - a) designed in accordance with the usual engineering practices, welding and calculation codes including all failure modes;
 - b) made of materials with adequate strength and of suitable quality;
 - c) made of materials free of defects;
- components are kept in good repair and working order, so that the required characteristics remain despite wear;
- by design of the load bearing elements, a safe operation of the machine is assured for loading ranges from zero to 100 % of the rated possibilities and during tests;
- a negotiation took place between the user and the manufacturer concerning particular conditions for the use and places of use of the GSE;
- the place of operation allows a safe use of GSE.

The extent to which hazards are covered is indicated in the scope of this European Standard.

The minimum essential criteria are considered to be of primary importance in providing safe, economical and usable GSE. Deviation from the recommended methods and conditions should occur only after careful consideration, extensive testing and thorough in service evaluation have shown alternative methods or conditions to be satisfactory.

This European Standard is a Type C standard as defined in **EN ISO 12100**.

1 Scope

This Part of EN 1915 specifies the conditions to be taken into consideration when calculating the strength and the stability of GSE according to **EN 1915-1** and the EN 12312 series under intended use conditions. It also specifies general test methods.

NOTE The methods given in this standard demonstrate one way of achieving an acceptable safety level. Methods that produce comparable results may be used.

This Part of EN 1915 does not establish additional requirements for the following:

- operation elsewhere than in an airport environment;

- operation in severe conditions, e.g. ambient temperature below -20 °C or over 50 °C, tropical or saturated salty atmospheric environment;
- hazards caused by wind velocity in excess of the figures given in this European Standard;
- earthquake, flood, landslide, lightning and more generally any natural catastrophe.

This Part of EN 1915 is not applicable to GSE which are manufactured before the date of publication by CEN of this Standard.

2 Normative references

A1 The following referenced documents are indispensable for the application 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. **A1**

A1 *deleted text* **A1**

EN 1915-1:2001, *Aircraft ground support equipment – General requirements – Part 1: Basic safety requirements*

A1 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 12312 (all parts), *Aircraft ground support equipment - Specific requirements* **A1**

A1 *deleted text* **A1**

A1 EN ISO 3834-1, *Quality requirements for fusion welding of metallic materials - Part 1: Criteria for the selection of the appropriate level of quality requirements (ISO 3834-1:2005)*

EN ISO 3834-2, *Quality requirements for fusion welding of metallic materials - Part 2: Comprehensive quality requirements (ISO 3834-2:2005)*

EN ISO 3834-3, *Quality requirements for fusion welding of metallic materials - Part 3: Standard quality requirements (ISO 3834-3:2005)*

EN ISO 3834-4, *Quality requirements for fusion welding of metallic materials - Part 4: Elementary quality requirements (ISO 3834-4:2005)*

EN ISO 5817, *Welding - Fusion-welded joints in steel, nickel, titanium and their alloys (beam welding excluded) - Quality levels for imperfections (ISO 5817:2003, corrected version:2005, including Technical Corrigendum 1:2006)*

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)*

ISO 2408, *Steel wire ropes for general purposes - Minimum requirements* **A1**

ISO 8625-1:1993, *Aerospace – Fluid systems – Vocabulary – Part 1: General terms and definitions relating to pressure*