

**Õhusõidukite maapealsed teenindusseadmed.
Erinõuded. Osa 5: Lennukite tankimisseadmed
KONSOLIDEERITUD TEKST**

Aircraft ground support equipment - Specific requirements -
Part 5: Air-craft fuelling equipment CONSOLIDATED TEXT

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 12312-5:2005+A1:2009 sisaldab Euroopa standardi EN 12312-5:2005+A1:2009 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 30.06.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 29.04.2009.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 12312-5:2005+A1:2009 consists of the English text of the European standard EN 12312-5:2005+A1:2009.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 30.06.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 29.04.2009.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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English Version

**Aircraft ground support equipment - Specific requirements - Part
5: Aircraft fuelling equipment**

Matériel au sol pour aéronefs - Exigences particulières -
Partie 5: Matériels d'avitaillement en carburant

Luftfahrt-Bodengeräte - Besondere Anforderungen - Teil 5:
Betankungseinrichtungen für Luftfahrzeuge

This European Standard was approved by CEN on 3 January 2005 and includes Amendment 1 approved by CEN on 1 March 2009.

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Contents

	page
Foreword.....	3
Introduction.....	4
1 Scope.....	5
2 Normative references.....	6
3 Terms and definitions.....	7
4 List of hazards.....	12
5 Safety requirements and/or measures.....	12
5.1 General requirements.....	12
5.2 Chassis, Engine.....	13
5.3 Additional requirements for trailers.....	14
5.4 Vehicle electrical system.....	15
5.5 Driver's cabin.....	17
5.6 Fuelling platforms.....	18
5.7 Specific fuelling equipment.....	19
6 Information for use.....	26
6.1 General marking.....	26
6.2 Additional marking.....	26
6.3 Warnings.....	27
6.4 Instructions.....	27
7 Verification of requirements.....	27
Annex A (informative) Aircraft fuelling equipment: brief description.....	29
A.1 Aircraft refueller.....	29
A.2 Hydrant dispenser.....	29
A.3 Pressure control.....	29
A.4 Metering.....	30
A.5 Platforms.....	30
A.6 Hoses.....	30
A.7 Typical fuel circuit diagrams.....	30
Annex B (normative) Aircraft fuelling equipment: basic requirements.....	33
B.1 Pressure definitions.....	33
B.2 Filtration.....	33
B.3 Pipes, fittings and joints.....	33
B.4 Calculation of emergency venting requirements in case of fire engulfment.....	33
Annex C (normative) List of hazards in addition to those of EN 1915-1.....	35
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC, amended by Directive 98/79/EC.....	37
Annex ZB (informative)  Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC 	38
Bibliography.....	39

Foreword

This document (EN 12312-5:2005+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 October 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

This document includes Amendment 1, approved by CEN on 2009-03-01.

This document supersedes EN 12312-5:2005.

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 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).

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

The Parts of EN 12312 — Aircraft ground support equipment — Specific requirements — are:

- 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: Aircraft movement equipment
- Part 8: Maintenance stairs and platforms
- Part 9: Container/Pallet loaders
- 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 equipment
- 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: Ground power equipment

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.

Introduction

This document specifies health and safety requirements, as well as some functional and performance requirements for aircraft fuelling equipment (AFE) intended for use on 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 AFE. 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.

This document is a Type C standard as stated in EN ISO12100-1 and EN ISO 12100-2.

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.

1 Scope

This document specifies the technical requirements to minimise the hazards listed in Clause 4 which can arise during the commissioning, operation and maintenance of AFE when carried out in accordance with the specifications given by the manufacturer or his authorised representative. It also takes into account some performance requirements recognised as essential by authorities, aircraft and ground support equipment (GSE) manufacturers as well as airlines, airports and fuelling companies.

This document applies to all types of aircraft fuelling equipment:

- aircraft refuellers;
- hydrant dispensers;
- defuellers;
- hydrant pit servicing vehicles;
- stationary dispensing units,

intended to service aircraft with aviation fuels and to be operated on airfields, heliports and other aircraft refuelling related areas such as maintenance bases.

NOTE 1 In general, the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) is not applicable to AFE as they are not deemed to be used on public roads. However, certain requirements have been considered when developing this standard.

The use of AFE on public roads is not intended with the following exceptions:

- transportation of fuel from tank farms to refuelling areas;
- maintenance purposes with empty cargo tanks.

NOTE 2 This may include the need of local traffic derogation (see Clause 0 of EN 1915-1:2001 — negotiation).

The intended functions of AFE are:

- loading fuel from the tank farm and/or a hydrant system to the AFE;
- storage and transportation of fuel;
- fuelling from the AFE to the aircraft;
- filtration of the fuel;
- metering the fuel for a transfer of custody;
- defuelling the aircraft to the AFE;
- flushing fuel from hydrant systems;
- unloading AFE to the tank farm after defuelling of an aircraft;
- transferring fuel from one AFE to another.

This document does not apply to:

- AFE whose only power source for aircraft refuelling is directly applied manual effort;
- hydrant systems, tank farms, pipework and underground tanks;
- specific hazards due to the operation of the AFE in a potentially explosive atmosphere;

— built-in fire extinguisher systems.

This document does not establish requirements for noise and vibration.

Noise and vibration are dealt with respectively in EN 1915-4 and EN 1915-3.

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

This document is not applicable to AFE which are manufactured before the date of publication of this document by CEN.

[A1] This part of EN 12312 is intended to be used in conjunction with EN 1915-1, EN 1915-2, EN 1915-3 (for vehicles) and EN 1915-4. **[A1]**

2 Normative references

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] *deleted text* **[A1]**

[A1] EN 764-1, *Pressure equipment — Part 1: Terminology — Pressure, temperature, volume, nominal size* **[A1]**

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

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

EN 1361, *Rubber hoses and hose assemblies for aviation fuel handling - Specification*

EN 1915-1:2001, *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*

[A1] EN 1915-3, *Aircraft ground support equipment — General requirements — Part 3: Vibration measurement methods and reduction* **[A1]**

[A1] EN 1915-4, *Aircraft ground support equipment — General requirements — Part 4: Noise measurement methods and reduction* **[A1]**

EN 50020, *Electrical apparatus for potentially explosive atmospheres — Intrinsic safety "i"*

[A1] EN 60079-0 **[A1]**, *Electrical apparatus for explosive gas atmospheres – Part 0: General requirements (IEC 60079-0:2004)*

EN 60079-1:2004, *Electrical apparatus for potentially explosive atmospheres – Part 1: Flameproof enclosure "d" (IEC 60079-1:2003)*

EN 60079-2:2004, *Electrical apparatus for explosive gas atmospheres – Part 2: Pressurized enclosure "p" (IEC 60079-2:2001)*

[A1] EN 60079-5, *Explosive atmospheres — Part 5: Equipment protection by powder filling "q" (IEC 60079-5:2007)* **[A1]**

[A1] EN 60079-6, *Explosive atmospheres — Part 6: Equipment protection by oil immersion "o" (IEC 60079-6:2007)* **[A1]**

[A1] EN 60079-7 **[A1]**, *Electrical apparatus for explosive gas atmospheres – Part 7: Increased safety "e" (IEC 60079-7:2001)*

EN 60079-11, *Explosive atmospheres — Part 11: Equipment protection by intrinsic safety "i"* (IEC 60079-11:2006)

EN 60079-14, *Electrical apparatus for explosive gas atmospheres – Part 14: Electrical installations in hazardous areas (other than mines)* (IEC 60079-14:2002)

EN 60079-15, *Electrical apparatus for explosive gas atmospheres – Part 15: Type of protection "n"* (IEC 60079-15:2001, modified)

EN 60079-18, *Electrical apparatus for explosive gas atmospheres – Part 18: Construction, test, and marking of type of protection encapsulation "m" electrical apparatus* (IEC 60079-18:2004)

EN 60529, *Degrees of protection provided by enclosures (IP code)* (IEC 60529:1989)

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

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)

ISO 45, *Aircraft - Pressure refuelling connections*

ISO 46, *Aircraft - Fuel nozzle grounding plugs and sockets*

ISO 102, *Aircraft - Gravity filling orifices* ~~deleted text~~

ISO 1102, *Commercial road vehicles — 50 mm drawbar eye — Interchangeability*

ISO 1728, *Road vehicles — Pneumatic braking connections between motor vehicles and towed vehicles — Interchangeability*. ~~Error! Bookmark not defined.~~

ISO 2883, *Rubber, vulcanized — Antistatic and conductive products for industrial use — Electrical resistance limits*

ISO 3584, *Road vehicles — Drawbar couplings — Interchangeability*

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

ISO 4009, *Commercial vehicles — Location of electrical and pneumatic connections between towing vehicles and trailers*

ISO 8755, *Commercial road vehicles — 40 mm drawbar eye — Interchangeability*

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3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 12100-1:2003, EN ISO 12100-2:2003 and EN 1915-1:2001 and the following apply.

3.1

aircraft fuelling equipment (AFE)

equipment used to handle aviation fuels on an airfield, including

- aircraft refuellers,
- hydrant dispensers,
- defuellers,
- hydrant pit servicing vehicles,
- stationary dispensing units