Meditsiinis kasutatavad liiklusvahendid ja nende varustus. Kiirabiautod

Medical vehicles and their equipment - Road ambulances

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1789:2008+A1:2010 sisaldab Euroopa standardi EN 1789:2007+A1:2010 ingliskeelset teksti.	This Estonian standard EVS-EN 1789:2008+A1:2010 consists of the English text of the European standard EN 1789:2007+A1:2010.
Standard on kinnitatud Eesti Standardikeskuse 30.06.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 30.06.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 14.04.2010.	Date of Availability of the European standard text 14.04.2010.
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ICS 11.160, 43.160

EUROPEAN STANDARD

NORME EUROPÉENNE

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EN 1789:2007+A1

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ICS 43.160; 11.160

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English Version

Medical vehicles and their equipment - Road ambulances

Véhicules de transport sanitaire et leurs équipements - Ambulances routières

Rettungsdienstfahrzeuge und deren Ausrüstung - Krankenkraftwagen

This European Standard was approved by CEN on 24 February 2007 and includes Amendment 1 approved by CEN on 6 March 2010.

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Foreword

This document (EN 1789:2007+A1:2010) has been prepared by Technical Committee CEN/TC 239 “Rescue systems”, 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of an identical text or by endorsement, at the latest by October 2010, and conflicting national standards shall be withdrawn at the latest by October 2010.

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 includes Amendment 1, approved by CEN on 2010-03-06.

This document supersedes A1 EN 1789:2007 A1.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 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).

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

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

This European Standard specifies requirements for the design, testing, performance and equipping of road ambulances used for the transport and care of patients. It contains requirements for the patient's compartment.

This European Standard does not cover the requirements for approval and registration of the vehicle and the training of the staff which is the responsibility of the authority/authorities in the country where the ambulance is to be registered.

This European Standard is applicable to road ambulances capable of transporting at least one person on a stretcher.

Requirements are specified for categories of road ambulances based in increasing order of the level of treatment that can be carried out. These are the patient transport ambulance (types A_1 A_2), the emergency ambulance (type B) and the mobile intensive care unit (type C).

This European Standard gives general requirements for medical devices carried in road ambulances and used therein and outside hospitals and clinics in situations where the ambient conditions can differ from normal indoor conditions.

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.

EN 3-7, *Portable fire extinguishers — Part 7: Characteristics, performance requirements and test methods*

EN 420, *Protective gloves — General requirements and test methods*

EN 455-1, *Medical gloves for single use — Part 1: Requirements and testing for freedom from holes*

EN 455-2, *Medical gloves for single use — Part 2: Requirements and testing for physical properties*

EN 471:2003, *High-visibility warning clothing for professional use — Test methods and requirements*

EN 737-1:1998, *Medical gas pipeline systems — Part 1: Terminal units for compressed medical gases and vacuum*

EN 737-3:1998, *Medical gas pipeline systems — Part 3: Pipelines for compressed medical gases and vacuum*

EN 739, *Low-pressure hose assemblies for use with medical gases*

EN 794-3, *Lung ventilators — Part 3: Particular requirements for emergency and transport ventilators*

EN 980, *Graphical symbols for use in the labelling of medical devices*

EN 1041, *Information supplied by the manufacturer with medial devices*

EN 1865, *Specifications for stretchers and other patient handling equipment used in road ambulances*

EN 12470-1, *Clinical thermometers — Part 1: Metallic liquid-in-glass thermometers with maximum device*

EN 13544-1, *Respiratory therapy equipment — Part 1: Nebulizing systems and their components*

EN 14052, *High performance industrial helmets*

EN 60068-2-6, *Environmental testing — Part 2: Tests — Tests Fc: Vibration (sinusoidal) (IEC 60068-2-6:1995 + Corrigendum 1995)*

EN 60068-2-29, *Basic environmental testing procedures — Part 2: Tests; test Eb and guidance: bump (IEC 60068-2-29:1987)*

EN 60068-2-32, *Basic environmental testing procedures — Part 2: Tests; test Ed: free fall (IEC 60068-2-32:1975 + A1:1982 + A2:1990)*

EN 60068-2-64, *Environmental testing — Part 2: Test methods — Test Fh: Vibration, broad-band random (digital control) and guidance (IEC 60068-2-64:1993 + Corrigendum 1993)*

EN 60601-1 (all parts), *Medical electrical equipment*

EN 60601-2 (all parts), *Medical electrical equipment*

EN 60601-2-4, *Medical electrical equipment — Part 2-4: Particular requirements for the safety of cardiac defibrillators (IEC 60601-2-4:2002)*

EN ISO 407, *Small medical gas cylinders — Pin-index yoke- type valve connections (ISO 407:2004)*

EN ISO 9919, *Medical electrical equipment — Particular requirements for the basic safety and essential performance of pulse oximeter equipment for medical use (ISO 9919:2005)*

EN ISO 10079-1:1999, *Medical suction equipment — Part 1: Electrically powered suction equipment — Safety requirements (ISO 10079-1:1999)*

EN ISO 10079-2:1999, *Medical suction equipment — Part 2: Manually powered suction equipment (ISO 10079-2:1999)*

EN ISO 10079-3:1999, *Medical suction equipment — Part 3: Suction equipment powered from a vacuum or pressure source (ISO 10079-3:1999)*

EN ISO 10524-1, *Pressure regulators for use with medical gases — Part 1: Pressure regulators and pressure regulators with flow-metering devices (ISO 10524-1:2006)*

EN ISO 10524-3, *Pressure regulators for use with medical gases — Part 3: Pressure regulators integrated with cylinder valves (ISO 10524-3:2005)*

EN ISO 11197:2004, *Medical supply units (ISO 11197:2004)*

EN ISO 14971, *Medical devices — Application of risk management to medical devices (ISO 14971:2007)*

prEN ISO 15002, *Flow-metering devices for connection to terminal units of medical gas pipeline systems (ISO/DIS 15002:2006)*

EN ISO 19054, *Rail systems for supporting medical equipment (ISO 19054:2005)*

EN ISO 20345, *Personal protective equipment — Safety footwear (ISO 20345:2004)*

EN ISO 21647, *Medical electrical equipment – Particular requirements for the basic safety and essential performance of respiratory gas monitors (ISO 21647:2004)*

IEC 60364-7-708, *Electrical installations of buildings — Part 7: Requirements for special installations or locations. Section 708 — Electrical installations in caravan parks and caravans*[1)]

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

ISO 5128:1980, *Acoustics— Measurement of noise inside motor vehicles*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
patient and emergency patient

3.1.1
patient
person whose condition requires appropriately trained personnel to provide medical care and/or suitable transport

3.1.2
emergency patient
patient who through sickness, injury or other circumstances is in immediate or imminent danger to life unless emergency treatment and/or monitoring and suitable transport to diagnostic facilities or medical treatment is provided

3.2
ambulance
vehicle or craft intended to be crewed by a minimum of two appropriately trained staff for the provision of care and transport of at least one stretchered patient

3.3
types of road ambulances[2)]

3.3.1
type A: patient transport ambulance
road ambulance designed and equipped for the transport of patients who are not expected to become emergency patients.

Two types of patient transport ambulance exist:

type A_1: suitable for transport of a single patient;

type A_2: suitable for transport of one or more patient(s) (on stretcher(s) and/or chair(s))

3.3.2
type B: emergency ambulance
road ambulance designed and equipped for the transport, basic treatment and monitoring of patients

1) IEC/TC 64 “Electrical installations and protection against electric shock” is developing the revision of IEC 60364-7-708. The draft is presently at the DIS stage. The standard, when ready, will be published as the first edition of the new section 7-721 “Electrical installations in caravans and motor caravans”.

2) Road ambulances are road vehicles which comply with type approval for special use vehicles according to Directive 70/156/EEC in the last applicable amended version.