



SLOVENSKI STANDARD
SIST EN 1789:2000/A1:2003

01-september-2003

Medicinska vozila in njihova oprema - Reševalna vozila

Medical vehicles and their equipment - Road ambulances

Rettungsdienstfahrzeuge und deren Ausrüstung - Krankenkraftwagen

Véhicules de transport sanitaire et leurs équipements - Véhicule d'ambulances

Ta slovenski standard je istoveten z: EN 1789:1999/A1:2003

[SIST EN 1789:2000/A1:2003](https://standards.iteh.ai/catalog/standards/sist/c77dd4b3-dc16-40ba-8425-ce48f3ee86b5/sist-en-1789-2000-a1-2003)

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ICS:

11.160	Účel [[[First aid
43.160	Vozila za posebne namene	Special purpose vehicles

SIST EN 1789:2000/A1:2003 **en**

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ICS 11.160; 43.160

English version

Medical vehicles and their equipment - Road ambulances

Véhicules de transport sanitaire et leurs équipements -
Véhicule d'ambulances

Rettungsdienstfahrzeuge und deren Ausrüstung -
Krankenkraftwagen

This amendment A1 modifies the European Standard EN 1789:1999; it was approved by CEN on 28 December 2002.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This amendment 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 Management Centre has the same status as the official versions.

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

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Foreword

This document (EN 1789:1999/A1:2003) has been prepared by Technical Committee CEN/TC 239 "Rescue Systems", the secretariat of which is held by DIN.

This Amendment to the 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 2003, and conflicting national standards shall be withdrawn at the latest by September 2003.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

Page 4

Introduction

Delete the whole introduction except the first sentence

1 Scope

Delete "test methods" in the first line and substitute the word "testing"
Delete the existing last paragraph in Clause 1 and substitute the following sentence:

"This 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."

Clause 2 Normative references

Delete on page 6 the EN ISO 3785 paragraph and add the following reference instead:

ISO 3795, "Road vehicles, and tractors and machinery for agriculture and forestry - Determination of burning behaviour of interior materials".

Page 7

3.2 Ambulance

Delete the existing text and substitute the following:

"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."

3.4 Net vehicle mass; unladen mass

Delete the existing definition without the Note and replace with the following:

"Net vehicle mass according to 70/156/EEC of the road ambulance including the driver taken as 75 kg and all fixed installations."

Page 8

4.1 General requirements

Delete the existing sentence and add the following:

“The road ambulance shall comply with the relevant regulation(s) for special use vehicles (see Footnote 1 on page 7).”

4.2.1 Acceleration

Delete the existing text and replace with the following:

“A road ambulance loaded to permissible gross vehicle mass shall be able to accelerate for 0 km/h to 80 km/h within 35 s.

Type B and C road ambulances loaded to permissible gross vehicles mass up to 3,5 t shall be able to accelerate from 40 km/h to 80 km/h in the 3rd or 4th gear, 4th (or 5th gear where 5-speed transmission is fitted) within 27 s.”

4.3.1 General

Delete the last paragraph and substitute the following sentence:

“There shall be both an optical and audible warning system.”

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Page 9

Table 1 — Minimum capacity/power

Delete Table Footnote 1 in Table 1.

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Change Table Footnote 2 in Table Footnote 1 and read Table Footnote 1 as follows:

“For special operational conditions”

In Table 1 for type C road ambulance in the line “generator power” delete 960 W and the table footnote number to 1 200 W.

For type B road ambulance in the line “additional battery(ies)” change the table footnote number for 80 Ah to ¹⁾ and also for 63 Ah to ¹⁾

4.3.3.1

Delete the first paragraph and substitute the following text:

“In type B and C road ambulances there shall be an externally mounted connector to enable charging and/or operation of for example;

- a battery(ies);
- medical devices when installed;
- a patient compartment heater when installed;
- an engine preheater when installed.

After b) add the following sentence:

“If the connector is located at the side of the vehicle it shall not be possible to start the engine whilst it is connected to an external 220/240 V power supply.”

Delete the last paragraph.

4.3.3.2

Delete the word “sockets” and replace it by “connections”

Page 10

Delete the word “sockets” in the title and second line of Table 2 and replace it by “connections”.

Change the word “device” in the Table 2 in “devices”.

4.3.3.3

Delete the whole text and replace with the following:

“ The electrical system in a road ambulance shall be separated from the base vehicle electrical system. All circuits in the additional system shall have separate overload protection ¹⁾. All circuits shall be well defined and clearly marked at the connection points and at a maximum of 1m intervals along its length. The system shall have enough circuits and be so constructed that when/if a circuit fails all illumination or medical technical equipment shall not be turned off.

¹⁾ Overload protection may consist of either fuses or so called Electronic Management Control systems.”

4.3.3.4

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Delete the whole text and replace with the following:

“The wiring and, where applicable conduits, shall withstand vibration. No wiring shall be located in or pass through conduit intended for medical gas installation. The wiring may not be loaded higher than stated by the wire manufacture.

4.3.3.5

Delete the word “outlets” and replace it by “connections”.

4.3.3.7

Delete the word “sub-systems” in the first line and add “systems”

4.3.4

Delete the last sentence in the second paragraph and add the following:

“They shall be electromagnetically compatible with the vehicle’s – electronic management system and medical devices.”

Delete the Note in 4.3.4 and add the following Note:

“Attention is drawn to Directive 99/5 EC R&TTE on electromagnetic compatibility.”

4.4.1 Fire safety

Replace “EN ISO 3785” with “ISO 3795”.

Page 11

Table 3 — Driver’s seat configuration

Delete the text in the column for type A1 and A2 road ambulances and replace with the following:

“The ergonomic space of the drivers compartment as approved by the car manufacturer shall not be reduced”.

Page 13

4.4.4 Bulkhead

Delete the last two paragraphs.

Page 14

4.4.6.2 Windows

Delete the first sentence and replace with the following:

“In the patient’s compartment there shall be a minimum of two external windows. There shall be one on each side or one on one side and the rear.”

4.5.1 General

Delete the fifth paragraph and replace with the following:

“Type B and C road ambulances shall be fitted with a hand-holding device positioned above each stretcher along the longitudinal axis.”

Change the “Note” in “Note 1”.

Delete the last sentence in 4.5.1 <https://standards.iteh.ai/catalog/standards/sist/c77dd4b3-dc16-40ba-8425-ce483ee86b5/sist-en-1789-2000-a1-2003>

Add NOTE 2 with the following text:

“The interior design should be in accordance with the directive 70/156/EEC.”

Page 15

4.5.2.1 Patient’s compartment dimensions for type A1, A2 and B road ambulances

Delete the words “(without installation)” in the first sentence and replace with the following:

"without cupboards, seats, medical devices and equipment"

Page 19

4.5.3 Patient and attendant seating

Add the following sentence at the end of this subclause:

“Seats for patients and attendants shall not be installed as side-facing.”

4.5.5 Heating system

Delete the third paragraph and replace with the following:

“The heating shall be controlled by an adjustable thermostat. The actual temperature shall not vary from the set temperature by more than 5 °C.”

Page 20

4.5.6 Interior lighting

Table 9

Replace the text for the Table Footnote in Table 9 with the following:

“Additionally there shall be a facility for switching the lighting level down to 150 lx.”

4.5.9 Maintain systems and fixations of the equipment in the patient’s compartment

Delete the words “Without exception” in the first line and start the sentence with “All”.

Delete the text under b) and substitute the following new text:

“The maximum distance the stretcher and any item attached to either the holding assembly or stretcher may travel shall be no more than 150 mm. The displacement of the patient during the test may exceed 150 mm.”

Add the following text as a Note at the end of this subclause:

“The restraint systems and seats for patient and attendants as well as the restraint systems for patient in chairs can be tested according to the EU directives 76/115/EEC and 77/541/EEC as an alternative to the test according to 5.3.”

Page 21

5.3 Testing of maintain systems and fixations of the equipment in the patient’s compartment

Add the following text as a Note after the second paragraph:

“The notified body who has to confirm the compliance with 4.5.9 according to 5.3 of EN 1789 should

- a) be acknowledged by government authorities according to article 14 of the directives 70/156/EEC and should be competent in the three fields of static testing, dynamic testing and calculation in order to judge which method is appropriate for the verification of the individual technical problem.
- b) have an acknowledgement for the directives 77/541/EEC and 74/408/EEC, in case of impact test also for directives 96/79/EEC. “

Page 23

Delete the words “is taken into account” in Footnotes ⁵⁾ and ⁶⁾ and substitute these words by “refers”.

6.3.5 Fixation of devices

Delete the first sentence and add the following:

“The device shall be restrained within the vehicle by means of a fixation system.”

Page 24

6.3.7 Electromagnetic compatibility

Delete the reference on directive 72/245/EEC in the Note and substitute with 95/54/EEC.

Page 33

Annex ZA

Delete the words “Table ZA.1” in line 5 and in the headline of the table and substitute by “Table ZA”.