



**SLOVENSKI STANDARD**  
**SIST EN 721:2000**  
**01-december-2000**

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**Leisure accommodation vehicles - Safety ventilation requirements**

Leisure accommodation vehicles - Safety ventilation requirements

Bewohnbare Freizeitfahrzeuge - Anforderungen an die Sicherheitslüftung

Véhicules habitables de loisirs - Exigences de ventilation de sécurité

**Ta slovenski standard je istoveten z: EN 721:1998**

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**ICS:**

43.040.60	Karoserije in deli karoserij	Bodies and body components
43.100	Osebni avtomobili. Bivalne prikolice in lahke prikolice	Passenger cars. Caravans and light trailers

**SIST EN 721:2000**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

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July 1998

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Descriptors: mobile homes, leisure facilities, caravans, ventilation, aeration, air, quality, specifications, design, tests

English version

Leisure accommodation vehicles - Safety ventilation  
requirements

Véhicules habitables de loisirs - Exigences de ventilation  
de sécurité

Bewohnbare Freizeitfahrzeuge - Anforderungen an die  
Sicherheitslüftung

This European Standard was approved by CEN on 1 July 1998.

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 Central Secretariat 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 Central Secretariat 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, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

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## Foreword

This European Standard has been prepared by Technical Committee CEN/TC 245 "Leisure accommodation vehicles", the secretariat of which is held by BSI.

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 January 1999, and conflicting national standards shall be withdrawn at the latest by January 1999.

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, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

This European Standard is based on ISO 7419 "Leisure accommodation vehicles - Ventilation requirements".

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## 1 Scope

This European Standard specifies the minimum safety ventilation requirements for leisure accommodation vehicles.

It also provides methods of calculation and testing of safety ventilation.

## 2 Normative references

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

EN 27418	Leisure accommodation vehicles - Vocabulary
EN 1645-1	Leisure accommodation vehicles - Caravans - Part 1: Habitation requirements relating to health and safety
EN 1646-1	Leisure accommodation vehicles - Motor caravans - Part 1: Habitation requirements relating to health and safety
EN 1647	Leisure accommodation vehicles - Caravan holiday homes - Habitation requirements relating to health and safety

## 3 Definitions

For the purposes of this European Standard the definitions given in EN 27418 shall apply, together with the following:

**3.1 overall plan area:** The overall plan area is measured as follows:

- a) Caravan. Overall width multiplied by overall length excluding towbar;
- b) Motor caravan. Overall width, excluding driving mirrors, multiplied by overall length. Where the accommodation section is demountable, the overall plan area is the overall length of the demountable section multiplied by the overall width;

- c) Caravan holiday home. Overall width multiplied by overall length excluding towbar. When a caravan holiday home comprises more than one element, the overall plan area is the sum of the areas of the separate elements before they are joined together.

**3.2 model:** A leisure accommodation vehicle is considered to be a different model from the tested model if any of the following apply:

- a) the exterior size and/or shape of the body is altered or in the case of a motor caravan a different base vehicle is used;
- b) the cooking appliances are situated more than 300 mm from, and/or have more burners than, the tested model and/or any other non room sealed appliance is of a different type or position;
- c) any permanent ventilation opening in the external shell of the vehicle is of a different type or situated more than 300 mm from its position in the tested model and/or there is consequent obstruction of any ventilation opening;
- d) the internal volume of the leisure accommodation vehicle, excluding furniture, differs by more than 10 %.

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### 4 Requirements

#### 4.1 General

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Each habitable compartment, excluding toilets and bathrooms, shall be provided with safety ventilation. A habitable compartment that includes a part that can be temporarily separated by a curtain shall be considered as a single compartment.

The ventilation shall permit:

- a) renewal of air for occupants;
- b) supply of combustion air for appliances that are not room sealed; and
- c) evacuation of the products of combustion for appliances that are not room sealed.

This requirement shall be considered fulfilled if, for each model (see 3.2):

- 1) the minimum free area of safety ventilation is provided, in accordance with clause 5; or

- 2) the CO<sub>2</sub> content of the air within the habitable compartments of the leisure accommodation vehicle does not rise by more than 1% absolute above the background level, when tested in accordance with clause 6 by an accredited testing centre, and a permanent label is affixed adjacent to the cooker ( see annex A).

If when the vehicle is in motion the free area of ventilation is reduced, then as the vehicle becomes stationary the ventilators shall automatically return to the position in which the free area of safety ventilation was calculated in accordance with clause 5 or tested in accordance with clause 6.

#### **4.2 Ingress of products of combustion**

No ventilation opening shall be positioned within 300 mm of an opening for the extraction of products of combustion.

Extractors or forced air ventilators shall be positioned so that products of combustion from a flue outlet are not drawn into the interior of the leisure accommodation vehicle.

#### **4.3 Avoidance of obstructions**

Ventilation openings shall be positioned so that they cannot be made ineffective by drapes, curtains or other obstructions.

If the ventilation is provided to the interior through a cupboard, bed box or similar space, it shall not be possible for the passage of air to be obstructed, e.g. by items stored in these spaces.

#### **4.4 Ventilator grilles**

The ventilation openings shall be protected by a grille or screen that shall be easily accessible for cleaning.

### **5 Minimum free area of safety ventilation, by calculation**

#### **5.1 General**

All screens and grilles (see 4.4) shall be accounted for when providing the minimum free area of safety ventilation.



When the high level ventilation is not provided by roof vents, the minimum high level ventilation area shall be twice the values shown for roof vents in table 1. The high level ventilation openings, which are not roof vents, shall be not less than 1800 mm from the interior floor level of the leisure accommodation vehicle, and in no case less than 300 mm above the upper surface of the uncompressed mattress of the highest sleeping berth.

Low level ventilation openings shall be not more than 100 mm above the interior floor level.

## 5.2 Sizes of ventilation openings in the principal habitation compartment

Ventilation openings in the principal habitation compartment shall conform to table 1. If any other compartment contains a non room sealed appliance, then the ventilation in the compartment shall also conform to table 1.

**Table 1: Minimum sizes of ventilation openings in the principal habitation compartment**

Overall plan area of leisure accommodation vehicles m <sup>2</sup>	Minimum high level ventilation (Roof vents) mm <sup>2</sup>	Minimum low level ventilation mm <sup>2</sup>
up to 5	7500	1000
over 5 and up to 10	10000	1500
over 10 and up to 15	12500	2000
over 15 and up to 20	15000	3000
over 20	20000	5000

## 5.3 Sizes of ventilation openings in other compartments (excluding 5.2)

All compartments not having a non room sealed appliance installed, excluding toilets and bathrooms, shall have a minimum of 1500 mm<sup>2</sup> of safety ventilation installed at high level, or 3000 mm<sup>2</sup> if not by a roof vent, as well as 500 mm<sup>2</sup> at low level.

## 6 Testing

### 6.1 Preparation

6.1.1 Carry out the test in a calm atmosphere with an ambient external temperature of  $(20 \pm 5) ^\circ\text{C}$ .

6.1.2 Measure the background level of CO<sub>2</sub> in the test area at a distance of 1000 mm from the test vehicle.

6.1.3 Shut all windows, doors and manually closable ventilators and keep closed during the test period. Open separating curtains.