



SLOVENSKI STANDARD

oSIST prEN 721:2019

01-februar-2019

Bivalna počitniška vozila - Zahteve za varnostno prezračevanje

Leisure accommodation vehicles - Safety ventilation requirements

Bewohnbare Freizeitfahrzeuge - Anforderungen an die Sicherheitslüftung

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Ta slovenski standard je istoveten z: prEN 721

<https://standards.iteh.ai/catalog/standards/sist/dd7e7af9-70f6-4055-b578-6e5f1f11521e/sist-en-721-2020>

ICS:

43.100

Osebni avtomobili. Bivalne
prikolice in lahke prikolice

Passenger cars. Caravans
and light trailers

oSIST prEN 721:2019

en,fr,de

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 721

December 2018

ICS 43.100

Will supersede EN 721:2004

English Version

Leisure accommodation vehicles - Safety ventilation requirements

Bewohnbare Freizeitfahrzeuge - Anforderungen an die Sicherheitslüftung

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 245.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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-CENELEC Management Centre has the same status as the official versions.

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

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents

Page

European foreword.....	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 Requirements	4
4.1 General	4
4.2 Ingress of products of combustion.....	5
4.3 Avoidance of obstructions	6
4.4 Safety ventilator grilles.....	6
5 Minimum free area of safety ventilation, by calculation	6
5.1 General.....	6
5.2 Sizes of safety ventilation openings in habitation compartments	7
5.2.1 Habitation compartments containing non-room-sealed appliances	7
5.2.2 Habitation compartments greater than 10 m ² floor area.....	7
5.2.3 Other habitation compartments.....	7
5.3 Alternative ventilation arrangements for caravan holiday homes over 25 m ² floor area.....	8
5.3.1 General.....	8
5.3.2 Method 1: (Trickle ventilator) Area determined per compartment	8
5.3.3 Method 2: (Trickle ventilator) Area determined by average.....	8
6 Testing.....	9
6.1 Preparation	9
6.2 Procedure.....	9
6.3 Test report.....	10
7 User's handbook.....	11
Annex A (normative) Warning notice	12

European foreword

This document (prEN 721:2018) has been prepared by Technical Committee CEN/TC 245 “Leisure accommodation vehicles”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 721:2004.

In relation to EN 721:2004, the main technical changes are:

- a) “ventilation” specified to “safety ventilation” throughout the document;
- b) specified to flueless appliances;
- c) normative references updated;
- d) in Table 1, requirements for ventilation extended to vehicles with an overall plan area above 30 m²;
- e) in 6.2 “Procedure”, procedure and calculation modified;
- f) in 6.3 “Test report”, elements of the test report specified;
- g) editorially modified.

SIST EN 721:2020

<https://standards.iteh.ai/catalog/standards/sist/dd7e7af9-70f6-4055-b578-6c5f1f11521c/sist-en-721-2020>

1 Scope

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

It provides alternative methods of calculation or testing of safety ventilation.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 13878, *Leisure accommodation vehicles - Terms and definitions*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13878 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

4 Requirements

4.1 General

Each habitable compartment, excluding toilets and bathrooms, shall be provided with safety ventilation. Where trickle ventilation is used in caravan holiday homes, the toilets and bathrooms shall be included. A habitable compartment that includes a part that can be temporarily separated by a curtain shall be considered as a single compartment.

The safety ventilation shall permit at least:

- a) renewal of air for occupants;
- b) supply of combustion air for appliances that are non-room-sealed, and
- c) evacuation of the products of combustion for flueless appliances.

This requirement shall be considered fulfilled if, for each model:

- d) the minimum free area of safety ventilation is provided, in accordance with Clause 5, or
- e) the CO₂ concentration in the air within each habitable compartment of the leisure accommodation vehicle does not rise by more than 1 % (10 000 ppm) absolute above the background level, when tested in accordance with Clause 6 and independently verified, and a permanent label is affixed adjacent to the cooker (see Annex A).

If, when the vehicle is in motion, the free area of safety 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

Flue terminals shall be sited in accordance with the appliance manufacturer's instructions preferably on the roof or in the wall of the vehicle.

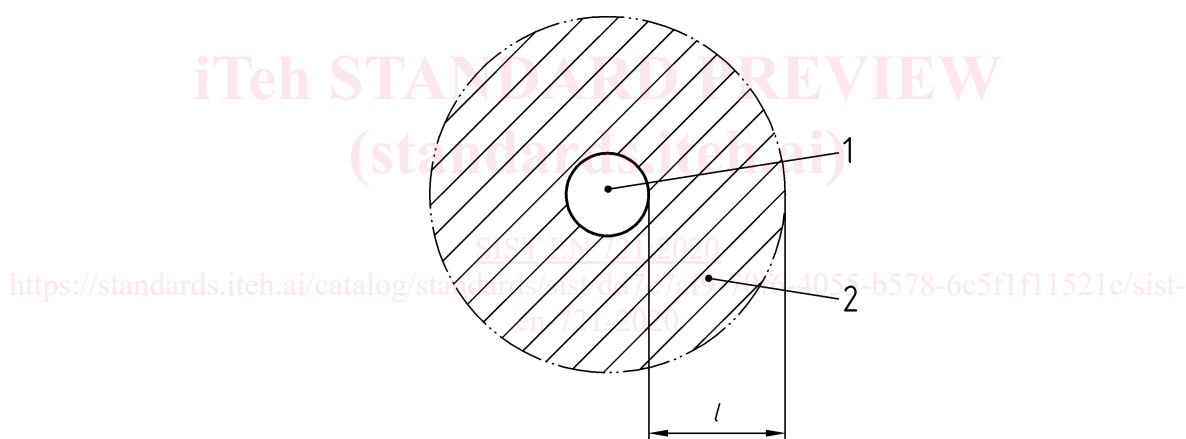
Where national legislation does not forbid that the flue of an appliance is designed to discharge through the floor, precautions shall be taken to prevent ingress of the products of combustion into the habitation area through safety ventilation openings in the floor. The terminal shall be positioned as close as possible to the sides or rear of the vehicle.

If there are underfloor flue terminals it is recommended that low level safety ventilation openings are positioned in the side of the vehicle and not in the floor.

Where the underfloor area is divided into distinct channels that project below the floor, e.g. by chassis members or floor bearers, there shall be no safety ventilation openings in the same channel as any flue outlet.

Flue terminals shall not be positioned within 500 mm of a refuelling point or fuel tank breather outlet or any ventilator from the fuel system(s).

Flue terminals positioned on a wall or a roof (except for gas appliances of not more than 30 g/h LPG consumption) shall not be fitted within 300 mm of a ventilator for the living space or an opening part of a window (see Figure 1).

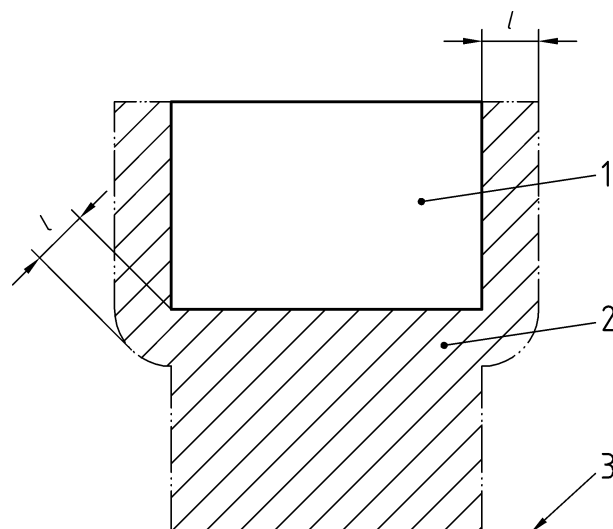


Key

- 1 Ventilator
- 2 Prohibited zone
- l = 300 mm

Figure 1 — Prohibited zone for discharge openings for the products of combustion in relation to ventilators

Where the flue terminal of an appliance (except for gas appliances of not more than 30 g/h LPG consumption) is positioned vertically below an opening part of a window, the appliance shall be fitted with an automatic shut-off device to prevent operation when the window is open (see Figure 2).

**Key**

- 1 Window
- 2 Prohibited zone
- 3 Floor
- l = 300 mm

Figure 2 — Prohibited zone for discharge openings for the products of combustion in relation to windows

4.3 Avoidance of obstructions

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

If the safety 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 inadvertently e.g. by items stored in these spaces.

4.4 Safety ventilator grilles

The safety ventilation openings shall be protected by a grille that shall be accessible for cleaning. Access may be gained by the use of a simple tool, e.g. a screwdriver.

5 Minimum free area of safety ventilation, by calculation

5.1 General

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

When the high level safety ventilation is not provided by roof vents, the minimum high level safety ventilation area shall be twice the values shown for roof vents in Table 1. The high level safety ventilation openings, which are not roof vents, shall be not less than 1 800 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.

A combination of roof and wall vents is acceptable. To calculate the level of safety ventilation required, subtract the level of safety ventilation given by the roof vent from the total required. Multiply the remainder by two to give the level of safety ventilation required of the wall vents.

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

5.2 Sizes of safety ventilation openings in habitation compartments

5.2.1 Habitation compartments containing non-room-sealed appliances

Safety ventilation openings shall conform to Table 1 for caravans and motorcaravans and to Table 2 for caravan holiday homes.

Table 1 — Minimum sizes of safety ventilation openings in habitation compartments containing non-room-sealed appliances in caravans and motorcaravans

Overall plan area m ²	Minimum high level safety ventilation (Roof vents) mm ²	Minimum low level safety ventilation mm ²
up to 5	7 500	1 000
over 5 and up to 10	10 000	1 500
over 10 and up to 15	12 500	2 000
over 15 and up to 20	15 000	3 000
over 20	20 000	5 000

Table 2 — Minimum sizes of safety ventilation openings in habitation compartments containing non-room-sealed appliances in caravan holiday homes

Area of habitation compartment m ²	Minimum high level safety ventilation (Roof vents) mm ²	Minimum low level safety ventilation mm ²
up to 5	7 500	1 000
over 5 and up to 10	10 000	1 500
over 10 and up to 15	12 500	2 000
over 15 and up to 20	15 000	3 000
over 20	20 000	5 000

5.2.2 Habitation compartments greater than 10 m² floor area

Habitation compartments greater than 10 m² floor area, measured from wall to wall, that do not contain non-room-sealed appliances shall have a minimum of 7 500 mm² of safety ventilation at high level, or 15 000 mm² if not by a roof vent as well as 1 000 mm² at low level.

5.2.3 Other habitation compartments

All habitation compartments that do not contain a non-room-sealed appliance, excluding toilets and bathrooms, shall have a minimum of 1 500 mm² of safety ventilation installed at high level, or 3 000 mm² if not by a roof vent, as well as 500 mm² at low level.

prEN 721:2018 (E)**5.3 Alternative ventilation arrangements for caravan holiday homes over 25 m² floor area****5.3.1 General**

As an alternative to the ventilation openings given in 5.2.2, caravan holiday homes with a floor area of over 25 m² may use trickle ventilators installed not less than 1 750 mm above the finished floor level. The minimum ventilator open area shall be determined by either method 1 (see 5.3.2) or method 2 (see 5.3.3).

5.3.2 Method 1: (Trickle ventilator) Area determined per compartment

a) The caravan holiday home shall have a minimum overall ventilation provision equivalent to 6 000 mm² for each of the following compartments:

- Main habitation compartment;
- Any other separate habitation compartment;
- Separate kitchen compartment;
- Separate utility room compartment;
- Separate sanitary compartment (WC, bathroom, shower room, etc.)

and each of the above compartments shall have a minimum provision of 4 000 mm².

NOTE Compartments excluded from calculations are those used solely for storage or solely for access (such as a hallway, lobby, etc.).

- SIST EN 721:2020
- b) Trickle ventilators shall be installed at a minimum height of 1,75 m from finished floor level (any trickle ventilators below this height shall be excluded from calculations for the overall ventilation provision or the compartment minimum requirement).
- c) Trickle ventilators shall be permanently open.
- d) To ensure adequate transfer of ventilation between rooms, there shall be openings at low level totalling an area not less than 7 600 mm².
- e) The ventilation provision shall be subject to any higher requirements imposed by an appliance manufacturer's instructions.

5.3.3 Method 2: (Trickle ventilator) Area determined by average

This method may only be used for compartments without non room-sealed appliances for caravan holiday homes.

Consideration shall be given to the requirements of non-room sealed appliances given by the appliance's manufacturer.

An average of 6 000 mm² of safety ventilation shall be provided per compartment via trickle ventilators. The minimum area of trickle ventilators to be provided in any habitation compartment is 4 000 mm².