



SLOVENSKI STANDARD

oSIST prEN 14752:2011

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Železniške naprave - Vrata in zapiralni sistemi na železniških potniških vozilih

Railway applications - Bodyside Entrance Systems for rolling stock

Bahnanwendungen - Seiteneinstiegssysteme für Schienenfahrzeuge

Applications ferroviaires - Systèmes de porte d'accès pour matériel roulant

Ta slovenski standard je istoveten z: **prEN 14752**

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Railway applications - Bodyside Entrance Systems for rolling stock

Applications ferroviaires - Systèmes de porte d'accès pour matériel roulant

Bahnanwendungen - Seiteneinstiegssysteme für Schienenfahrzeuge

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 256.

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.

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Foreword

This document (prEN 14752:2011) has been prepared by Technical Committee CEN/TC 256 “Railway applications”, the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 14752:2005.

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 2008/57/EC.

For relationship with EU Directive 2008/57/EC, see informative Annex ZA, which is an integral part of this document.

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Introduction

This European Standard specifies the minimum requirements for construction and operation of railway passenger access systems to ensure

- safe access and egress from passenger trains through body side doors and steps,
- a minimum risk of injury to persons as a result of door and step operation,
- that the doors remain closed when the vehicle is in motion and
- safe maintenance of the door systems.

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1 Scope

The requirements of this European Standard apply to passenger body side entrance systems of all newly designed railway vehicles such as tram, metro, suburban, mainline and high-speed trains that carry passengers. The requirements of this European Standard also apply to existing vehicles undergoing refurbishment of the door equipment, as far as it is reasonably practicable.

This Standard also specifies the requirements for testing of entrance systems.

This European Standard makes reference to manual and power operated entrance systems. For manual doors clauses referring to power operation are not applicable.

This European Standard does not apply to entrance systems for equipment access, inspection or maintenance purposes and for crew only use.

Doors on freight wagons are not subject to this standard.

Doors or hatches specifically provided for escape under emergency conditions are excluded.

2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 12567-1, *Thermal performance of windows and doors*

EN 12663-1, *Railway applications – Structural requirements of railway vehicle bodies*

EN 12947, *Textiles - Determination of the abrasion resistance of fabrics by the Martindale method*

EN 13272, *Railway applications – Electrical lighting for rolling stock in public transport systems*

EN 14067 (all parts), *Railway applications – Aerodynamics*

EN 15663, *Railway applications - Definition of vehicle reference masses*

prEN 45545 (parts 1, 2, 3, 4, 6 and 7), *Railway applications – Fire protection of railway vehicles*

EN 50121-3-2, *Railway applications – Electromagnetic compatibility – Part 3-2: Rolling stock – Apparatus*

EN 50125-1, *Railway applications – Environmental conditions for equipment – Part 1: Equipment on board rolling stock*

EN 50126, *Railways applications – The specification and demonstration of reliability, availability, maintainability and safety (RAMS)*

EN 50128, *Railway applications - Communication, signalling and processing systems*

EN 50153, *Railway applications – Rolling stock – Protective provisions relating to electrical hazards*

EN 50155, *Railway applications – Electronic equipment used on rolling stock*

EN 50215, *Railway applications – Testing of rolling stock after completion of construction and before entry into service*

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EN 60077-1:2002, *Railway applications – Electric equipment for rolling stock – Part 1: General service conditions and general rules*

EN 61373, *Railway applications - Rolling stock equipment - Shock and vibration tests*

EN ISO 10140-3, *Acoustics – Measurement of sound insulation in buildings and of building elements – Part 3: Laboratory measurements of airborne sound insulation of building elements*

UIC 413:XXXX *Measures to facilitate travel by rail*

UIC 566:1990, *Loadings of coach bodies and their components*

UIC 660:2002, *Measures to ensure the technical compatibility of high-speed trains*

DIN 6164-1:1980-02, *DIN colour chart – System based on the 2° standard colorimetric observer*

DIN 6164-2:1980-02, *DIN colour chart – Specification of colour samples*

prEN16186-1 *Railway applications – Driver’s Cab Part1- Visibility,layout , access*

prEN16116-1 *Railway applications -----steps and handrails*

3 Terms and definitions

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

3.1**door**

bodyside panel or panels available for passenger access and egress, including its components

3.2**automatic closing**

powered closing of the door by central command without intervention by the passenger

3.3**local closing**

powered closing by intervention of the passenger or by a local automatic device

3.4**door operation**

all door operating sequences

3.5**door button**

device to initiate door opening or closing command

3.6**enabled door**

door released by the train crew or an automatic system to permit operation by the door button

3.7**locked door**

closed door held closed by a mechanical device

3.8**door/step out of service**

door or step which is locked and not available for use

3.9**door/step isolated**

the pneumatic and/or electric power supply is isolated

3.10**unlocked door**

door with mechanical door locking released

3.11**train crew**

persons authorised to carry out the duties for door operation

3.12**routine test**

test to which each door equipment is subjected during or after manufacturing

3.13**type test**

test of one door system and its components to prove that the design meets the standard and the relevant specifications

3.14**contract**

agreement between manufacturer of the door system and buyer of that door system

3.15**RIC-KEY**

key according to the agreement on mutual use of vehicles for persons and goods in the international transport (RIC); see Annex H

3.16**power operated door system**

door system which operates doors in opening and closing direction by machine power

3.17**manual doors**

doors the closing and/or opening of which is exclusively operated by hand power of crew or passengers

3.18**leading edge**

edge of the door, leading during closing movement

3.19**emergency egress device**

operating element for manual opening of the door from inside in case of emergency

3.20**access device**

operating element for door opening from outside when the door is not available for normal operation

3.21**contrast**

Perception of a difference visually between one surface or element of a building/rail vehicle and another by reference to their light reflectance values (LRV) From BS 8300:2009

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When applying colour to two adjacent surfaces, to provide sufficient contrast, the contrast between the colours will be determined by the light reflectance value, the hue and by the chromatic value of each. (D)

For the purposes of this Standard "Contrast" shall be assessed by the diffused light reflectance value, but may be enhanced by variation in hue and chroma. For Testing methods see EN for PRM.

3.22**tactile signs and controls**

—Tactile signs□ and —tactile controls□ are signs or controls, including raised pictograms, raised characters or Braille lettering. For tactile pictograms and characters the depth shall be a minimum of 0,5mm raised above the surface and shall not be engraved and shall be square edged (i.e. not rounded or sharp).

The character or pictogram spacing should allow for both sides of the embossed letter, number or symbol to be felt with the fingers in a single pass.

The minimum character or number height shall be 15mm.

National Standard Braille shall be used wherever Braille characters are used. The Braille dot shall be dome shaped. Grade I Braille shall be used for single words, and a locator shall be incorporated. For further details see EN for PRM.

3.23**palm operated**

palm operated means that the device shall be operable by the palm or any part of the hand in its working position, not requiring fingers to be unclenched. The design need is that passengers with painful conditions, which affect their joints such as arthritis, may be unable to (and are likely to experience discomfort or pain if they do) exert any force with the tip of a single finger. Many will not be able to unclench their fingers to do this.

3.24**first step**

first step of a vehicle that a passenger shall use to board or alight a train. This will normally be the step that is closest to the platform edge. It may be a fixed or a moveable step.

3.25**slip resistant**

"Slip resistant" means that any surface finish used should be sufficiently rough or otherwise specially shaped so that friction between the surface, and a person's shoe or a mobility aid, is maintained at an acceptable level in both wet and dry conditions. Assessment methodology as defined in En for PRM.

3.26**bridge plate**

a bridge plate is a device integrated into the vehicle, fully automatic and activated/controlled in conjunction with the door opening/closing sequences. The purpose of the bridge plate is to facilitate wheelchair access.

It retains its strength without support on the station platform.

3.27**semi-automatic ramp**

a semi- automatic ramp is a device integrated into the vehicle which is supported on the station platform when extended. Deployment is locally activated and supervised. The purpose of the semi automatic ramp is to facilitate wheelchair access.

3.28**manual ramp**

a manual ramp is a device integrated into the vehicle which is supported on the station platform when extended. Deployment is manual. The purpose of the manual ramp is to facilitate wheelchair access.

3.29**moveable step**

a moveable step is a device integrated into the vehicle, fully automatic and activated/controlled in conjunction with the door opening/closing sequences. The purpose of the moveable step is to reduce the gap in width and height between vehicle and platform. It retains its strength without support on the station platform

4 Constructional requirements**4.1 Doorway design****4.1.1 Door throughway design****4.1.1.1 Minimum width**

Doors shall have an unrestricted passage width of 800 mm (1) minimum to allow unimpeded access and egress of passengers (see Figure 1 as an example for the measuring method).

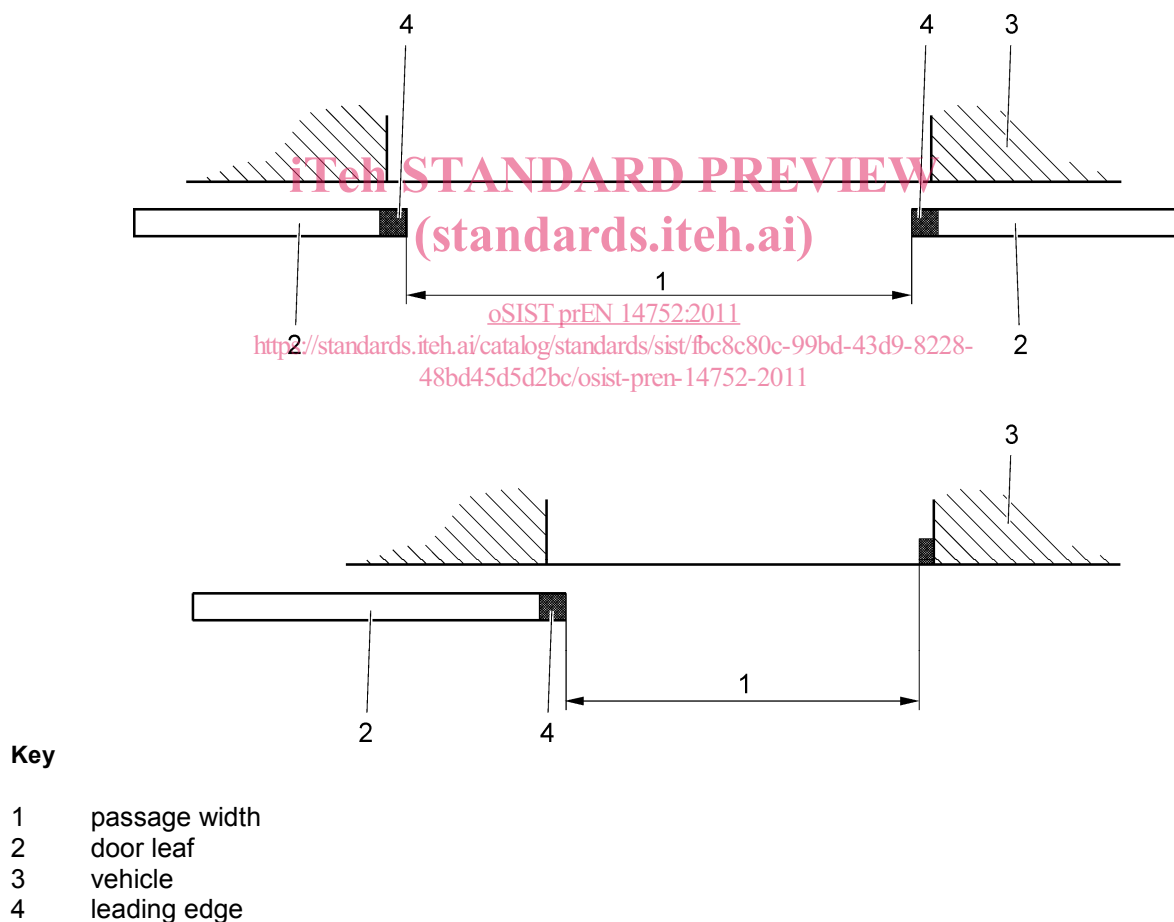


Figure 1 — Minimum width

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4.1.1.2 Minimum height

Doors shall have an unrestricted vertical passage height of $l_1 \geq 1900$ mm minimum (see Figure 2 for the measuring method).

Dimensions in millimetres

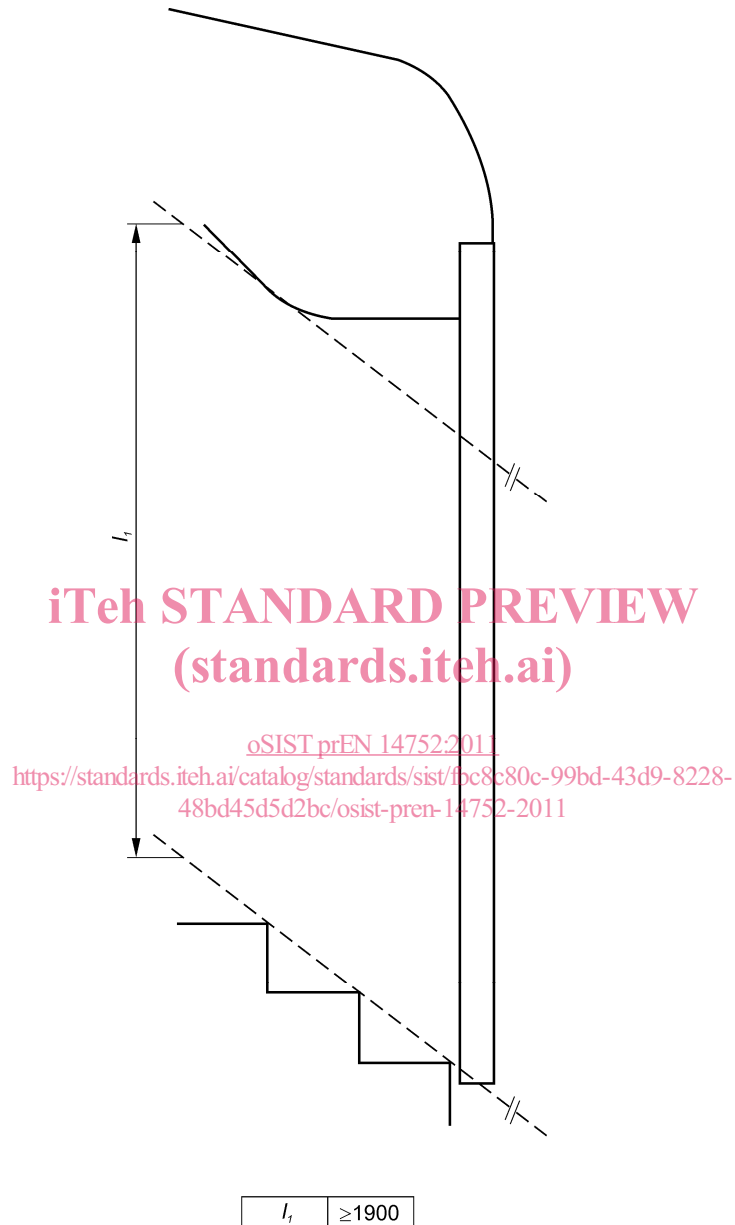


Figure 2 — Minimum height

4.1.2 Steps

4.1.2.1 Entrance area – General

External steps shall have at least the full door width and shall be in line with the door throughway.

Internal steps should have at least the full door width and should be in line with the door throughway.

Access to the vestibule of the vehicle shall be achieved with a maximum of 4 steps of which one may be external.

4.1.2.2 Step dimensions

4.1.2.2.1 Internal steps for external access

Internal steps for external access shall have a maximum height of $l_1=200$ mm and a minimum depth of $l_4=240$ mm (going) between the vertical edges of the step. The rising height of each step shall be equal.

The height of each step may be increased to a maximum of $l_1=230$ mm if it can be demonstrated that this achieves a reduction of one in the total number of steps required.

(For example, if a vertical distance of 460 mm is to be traversed, it can be demonstrated that using steps of up to $l_1=230$ mm reduces the number of steps required from 3 to 2.)

Details see Fig 3

4.1.2.2.2 External steps

An external access step, fixed or moveable, shall have a maximum height of $l_2=230$ mm between steps and a minimum depth of l_3 150 mm. If a step is fitted and it is an extension of a door sill outside the vehicle, and there is no change in level between the step and the floor of the vehicle, this shall not be considered to be a step for the purposes of this specification. Details see Fig 3

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