



SLOVENSKI STANDARD
SIST-TS CEN/TS 16635:2014

01-oktober-2014

Železniške naprave - Načrtovanje za osebe z omejenimi gibalnimi sposobnostmi - Oprema in sestavni deli na železniških vozilih - Stranišča

Railway application - Design for PRM Use - Equipment and Components onboard Rolling Stock - Toilets

Bahnanwendungen - Gestaltung für mobilitätseingeschränkte Menschen - Ausrüstungen und Bauteile in Schienenfahrzeugen - Toiletten

Applications ferroviaires - Conception à l'usage des personnes à mobilité réduite - Équipements et éléments à bord du matériel roulant - Toilettes

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Ta slovenski standard je istoveten z: CEN/TS 16635:2014

ICS:

11.180.01	Pripomočki za onesposobljene in hendikepirane osebe na splošno	Aids for disabled and handicapped persons in general
45.060.01	Železniška vozila na splošno	Railway rolling stock in general

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TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
TECHNISCHE SPEZIFIKATION

CEN/TS 16635

August 2014

ICS 43.060.20

English Version

**Railway application - Design for PRM Use - Equipment and
Components onboard Rolling Stock - Toilets**

Applications ferroviaires - Conception à l'usage des
personnes à mobilité réduite - Équipements et éléments à
bord du matériel roulant - Toilettes

Bahnanwendungen - Auslegung für eingeschränkt mobile
Personen - Einrichtungen und Komponenten in
Schienenfahrzeugen - Toiletten

This Technical Specification (CEN/TS) was approved by CEN on 26 November 2013 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

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Foreword

This document (CEN/TS 16635:2014) has been prepared by Technical Committee CEN/TC 256 "Railway applications", the secretariat of which is held by DIN.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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CEN/TS 16635:2014 (E)**Introduction**

This document is a Technical Specification for the assessment of the internal space requirements of a universal (wheelchair accessible) toilet.

This document aims to define the assessment and measuring methodology to allow a clear pass/fail assessment and allow successful implementation of the Technical Specification for Interoperability (TSI) for Persons with Reduced Mobility (PRM) [1]. Clause 5 reflects the requirements in the TSI and Clause 6 adds assessment criteria based on those requirements.

This document will be used until the issuing of EN 16585-1, *Railway applications — Design for PRM use — Equipment and components onboard rolling stock — Part 1: Toilets* [2].

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1 Scope

This Technical Specification describes the specific 'Design for PRM use' requirements applying to rolling stock on the Trans-European Network (TEN) covered by the TSI for PRM and the assessment of those requirements. Regarding this document, the following statements apply.

- The definitions and requirements describe specific aspects of 'Design for PRM use' required by persons with reduced mobility as defined in the TSI PRM.
- The definitions and requirements of this specification will be used for rolling stock applications.
- This specification only refers to aspects of accessibility for PRM passengers; it does not define general requirements and general definitions for specific components and systems.
- This specification assumes that the vehicle is in the nominal operating condition; any damage or operating failures will not be taken into account when assessing these requirements.
- Where minimum or maximum dimensions are quoted, these are absolute NOT nominal requirements.

Measurement methods and/or assessment procedures needed to establish a clear pass/fail assessment are provided where necessary.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12183: 2014, *Manual wheelchairs Requirements and test methods*

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3 Terms and definitions

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

3.1

universal toilet

toilet designed to be used by **all** passengers including passengers in wheelchairs

4 Symbols and abbreviations

Table 1 — Abbreviations

Abbreviation	Designation
PRM	Persons with Reduced Mobility
TEN	Trans-European Network
TSI	Technical Specification of Interoperability

Table 2 — Symbols

Symbol	Designation
%ile	Percentile
3D	3 Dimension

5 Requirements – Universal toilet dimensions

There shall be sufficient space inside the toilet compartment to enable a wheelchair as defined in Annex A to be manoeuvred to a position adjacent to the toilet seat, following both approaches shown in Figure 1.



Figure 1 — Wheelchair positions adjacent to toilet seat

In front of the toilet seat there shall be a clear space with a minimum length of 700 mm as shown in Figure 2.

Dimensions in millimetres

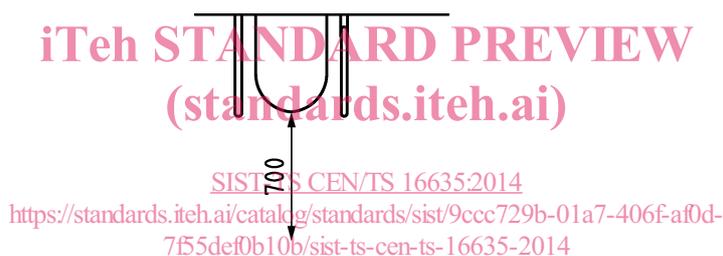


Figure 2 — Clear space in front of toilet seat

All amenities (wash basin, soap dispenser, mirror, water dispenser and hand dryer) shall be readily accessible to a person in a wheelchair.

6 Assessment – Universal toilet internal space

There shall be sufficient space to permit a wheelchair as defined in Annex A to be manoeuvred to a position adjacent to one side of the toilet seat to allow a side transfer as shown in Figure 3 at a position between 0° (parallel to the centreline of the toilet pan) and 40° .

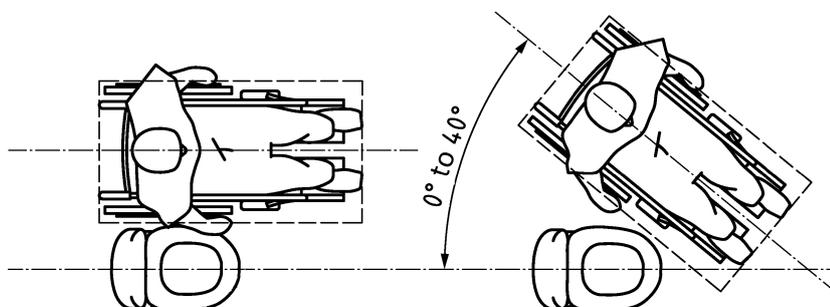


Figure 3 — Example for a lateral or side approach for right hand transfer to toilet seat

Assessment for a side approach:

- Method A: Side transfer wheelchair position is between 0° (parallel to pan centreline) and 40° with a turning circle of 1 500 mm that overlaps a rectangle of 1 250 mm \times 700 mm wheelchair space envelope, see Figure 4. Across the full 700 mm side that would be the front of the wheelchair, see Figure 2. The wash basin may overlap the manoeuvring space by up to 300 mm if complying with knee and toe space requirements as in Figure B.1.

NOTE 1 Allowance for hands either side needs to be considered when assessing manoeuvring.

NOTE 2 See Figure C.3 for examples of current toilet designs with this assessment method overlaid.

- Method B: Movement through door to a position touching the toilet pan at an angle of maximum $\pm 40^\circ$ to its centre line demonstrated through no more than five manoeuvres (after entering the toilet compartment) using the characteristics of the simplified profile of a person in a wheelchair as defined in Figure 5. The wash basin may overlap the manoeuvring space by up to 300 mm if it is complying with knee and toe space requirements in Figure B.1.

NOTE 3 Allowance for hands either side needs to be considered when assessing manoeuvring.

A curvature of up to 50 mm in radius between floor and wall is accepted, see Figure 8. Therefore when assessing compliance of the above, the measurements are permitted to be taken 50 mm above the walking floor.

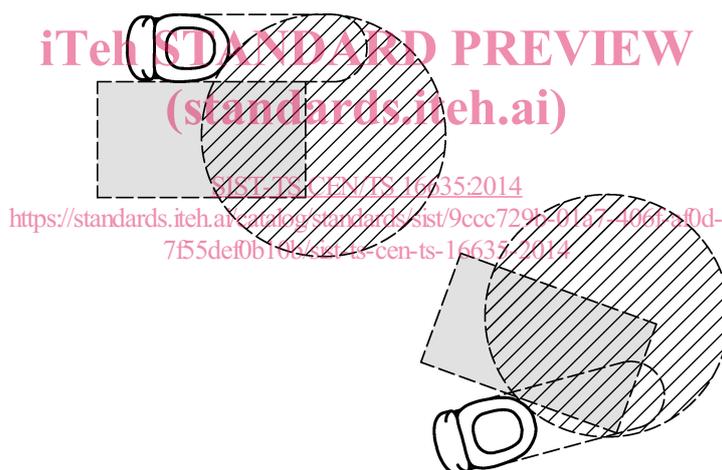


Figure 4 — Examples for method 'A' assessment of side approach