

**RAUDTEEALASED RAKENDUSED. GABARIIDID.
OSA 1: ÜLDIST. ÜLDREEGLID TARISTULE JA
RAUDTEEVEEREMILE**

**Railway applications - Gauges - Part 1: General -
Common rules for infrastructure and rolling stock**

EESTI STANDARDI EESSÕNA**NATIONAL FOREWORD**

See Eesti standard EVS-EN 15273-1:2013+A1:2017 sisaldab Euroopa standardi EN 15273-1:2013+A1:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 15273-1:2013+A1:2017 consists of the English text of the European standard EN 15273-1:2013+A1:2016.
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English Version

Railway applications - Gauges - Part 1: General - Common rules for infrastructure and rolling stock

Applications ferroviaires - Gabarits - Partie 1 :
Généralités - Règles communes à l'infrastructure et au
matériel roulant

Bahnanwendungen - Begrenzungslinien - Teil 1:
Allgemeines - Gemeinsame Vorschriften für
Infrastruktur und Fahrzeuge

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European Foreword

This document (EN 15273-1:2013+A1:2016) has been prepared by Technical Committee CEN/TC 256 "Railway applications", the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by May 2017, and conflicting national standards shall be withdrawn at the latest by May 2017.

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

This document includes the amendment adopted by the CEN on 25 July 2016.

This document replaces A1 EN 15273-1:2013 A1.

The start and end of the text added or modified by the amendment is indicated in the text with A1 and A1 respectively.

A1 This document was drafted as part of a mandate issued to CEN by the European Commission and European Free Trade Association. A1

A1 *text deleted* A1

According to the CEN/CENELEC internal regulations, the national standards organizations of the following countries are bound to implement this European Standard: 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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This document is the first of a series of three standards that comprise the European Standard covering gauges:

- part 1 covers general principles, phenomena shared by the infrastructure and by the rolling stock, reference profiles and their associated rules;
- part 2 gives the rules for dimensioning the vehicles according to their specific characteristics for the relevant gauge and for the related calculation method;
- part 3 gives the rules for dimensioning the infrastructure in order to allow vehicles built according to the relevant gauge taking into account the specific constraints to operate within it.

This standard defines the gauge as an agreement between infrastructure and rolling stock.

The aim of this standard is to define the space to be cleared and maintained to allow the running of rolling stock, and the rules for calculation and verification intended for sizing the rolling stock to run on one or several infrastructures without interference risk.

This standard defines the responsibilities of the following parties:

- for the infrastructure:
 - gauge clearance;
 - maintenance;
 - infrastructure monitoring.
- for the rolling stock:
 - compliance of the operating rolling stock with the gauge concerned;
 - maintenance of this compliance over time.

This standard includes a catalogue of various railway gauges implemented in Europe, some of which are required to ensure the interoperability, while others are related to more specific applications. This catalogue is not exhaustive and the standard does not preclude the possibility of applying or defining other gauges not included in the catalogue for the specific needs of certain networks.

1 Scope

This European Standard is applicable to authorities involved in railway operation and may also be applied for light vehicles (e.g. trams, metros, etc. running on two rails) and their associated infrastructure, but not for systems such as rail-guided buses.

It allows rolling stock and infrastructures to be dimensioned and their compliance to be checked relative to applicable gauging rules.

For rolling stock and infrastructure, this standard is applicable to new designs, to modifications and to the checking of vehicles and infrastructures already in use.

This document EN 15273-1 covers:

- the general principles;
- the various elements and phenomena affecting the determination of gauges;
- the various calculation methods applicable to the elements shared by the infrastructure and by the rolling stock;
- the sharing rules for elements taken into account in calculations specific to the infrastructure and to the rolling stock;
- a catalogue of European gauges.

This document does not cover:

- conditions to be met to ensure safety of passengers on platforms and of persons required to walk along the tracks;
- conditions to be met by the fixed equipment maintenance machines in active position;
- the space to be cleared for the running track of rubber-tired metros and other vehicles;
- rules applicable to extraordinary transportation, however some formulae may be used;
- rules applicable to the design of the overhead contact line system;
- rules applicable to the design of the current collection system on a third rail;
- simulation methods for the running of vehicles, however, it does not confirm the validity of existing simulations;
- verification rules of wagon loadings;
- coding methods for combined transportation;
- infrastructure gauges for very small curve radii (e.g. $R < 150$ m for gauge G1).

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 14067-2, *Railway applications — Aerodynamics — Part 2: Aerodynamics on open track*

EN 14067-3, *Railway applications — Aerodynamics — Part 3: Aerodynamics in tunnels*

EN 14363, *Railway applications — Testing for the acceptance of running characteristics of railway vehicles — Testing of running behaviour and stationary tests*

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EN 15273-2:2013,+A1:2016 Ⓐ₁, *Railway applications — Gauges — Part 2: Rolling stock gauge*

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EN 15273-3:2013+A1:2016 Ⓐ₁, *Railway applications — Gauges — Part 3: Structure gauges*

EN 15313, *Railway applications — In-service wheelset operation requirements — In-service and off-vehicle wheelset maintenance*

EN 50367, *Railway applications — Current collection systems — Technical criteria for the interaction between pantograph and overhead line (to achieve free access)*

EN 50119, *Railway applications — Fixed installations — Electric traction overhead contact lines*

3 Terms and definitions

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

3.1 running surface (of the track)

virtual plane coplanar with the rail tops of a track

3.2 normal co-ordinates

are measured in relation to the orthogonal axes defined in a transverse plane, normal to the longitudinal centreline of the rails in the nominal position on a theoretically perfect track

Note 1 to entry: One of these axes, commonly referred to as the horizontal axis, is the intersection of the transverse plane with the running surface.

Note 2 to entry: The other axis, commonly referred to as the vertical axis, is perpendicular to the running surface and is equidistant from the rails.

Note 3 to entry: For calculation purposes, the vertical axis is used as a common reference for the infrastructure and for the rolling stock (see Figure 1).