

Železnice Infraštruktúra Demontovateľné stroje, prívesy a pridružené zariadenie Časť 1: Technické požiadavky na dopravu a prevádzku

STN EN 15955-1

28 2248

Railway applications - Infrastructure - Demountable machines, trailers and associated equipment - Part 1: Technical requirements for travelling and working

Táto norma obsahuje anglickú verziu európskej normy. This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 07/25

Obsahuje: EN 15955-1:2025

Oznámením tejto normy sa ruší STN EN 15955-1 (28 2248) z októbra 2013

STN EN 15954-1 (28 2247) z októbra 2013

140888

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN 15955-1

May 2025

ICS 45.060.20; 45.120

Supersedes EN 15954-1:2013, EN 15955-1:2013

English Version

Railway applications - Infrastructure - Demountable machines, trailers and associated equipment - Part 1: Technical requirements for travelling and working

Applications ferroviaires - Infrastructure - Machines déraillables, remorques et éléments associés - Partie 1 : Prescriptions techniques pour le déplacement et le travail Bahnanwendungen - Infrastruktur - Ausgleisbare Maschinen, Anhänger und zugehörige Ausstattung -Teil 1: Technische Anforderungen an die Versetzfahrt und den Arbeitseinsatz

This European Standard was approved by CEN on 7 March 2025.

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 CEN-CENELEC Management Centre 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 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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.



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

Introduction 8 1 2 3 Terms and definitions......11 Hazards and categories......13 4.1 List of significant hazards13 Examples of demountable machines and trailers.....14 4.2 4.3 Attachments with rail wheels......14 5 Requirements and/or measures14 5.1 5.2 Travelling mode gauge profile15 5.2.1 5.2.2 Determination of lateral limit of exceedance allowed on curves in working mode...16 5.2.3 5.2.4 Working limit in the upper area - protection for the operator......17 5.2.5 Interaction with the infrastructure......17 5.3 5.3.1 5.3.2 Loads applied to the ballast18 5.3.3 5.3.4 5.4 Running safety equipment18 5.5 Inter-machine couplings18

5.5.1	Couplings	18
5.5.2	Special case for trailer that cannot be coupled with other trailers	18
5.6	Braking	19
5.6.1	General	19
5.6.2	Braking of towing machines	19
5.6.3	Braking of trailers	19
5.6.4	Breakaway braking of trailers	20
5.6.5	Continuous service air brake system compatible with UIC brake	20
5.6.6	Air continuous brake for trailers	20
5.7	Driving and working cabs	20
5.8	Communications between work positions	20
5.9	Controls	21
5.10	Visibility and audibility of the machine	21
5.10.1	Requirements for demountable machines	21
5.10.2	Requirements for trailers	21
5.10.3	Trailer light switching arrangements	21
5.11	Warning systems	22
5.12	Warning systems for personnel of traffic on adjacent lines in working mode	22
5.13	Electrical system	22
5.13.1	General	22
5.13.2	Working environment	22
5.13.3	Specific requirements for urban rail machines for working with live overhead conline systems	
5.14	Electromagnetic compatibility	23
5.14.1	Emissions from machines	23
5.14.2	Immunity of machines from railway environment	23
5.15	Power supply	23
5.16	On and off tracking	23

5.16.1	General	23
5.16.2	Use of turntables	24
5.17	Setting up and packing away	24
5.18	General and railway specific attachments	24
5.19	Emergency stopping devices	24
5.20	Emission of gas and particles	24
5.21	Protection from the risks of fire	24
5.22	Trailer obscuring operator view	25
5.23	Demountable modules	25
5.24	Rated capacity indicator/rated capacity limiter (RCI / RCL)	25
5.25	Climatic conditions	25
6	Trailers used to carry machines	26
7	Marking and numbering of the machine	26
7.1	Identification plate	26
7.2	Marking	26
8	Documentation	27
8.1	General	27
8.2	Technical description	27
8.3	Instructions for use	27
8.4	Restrictions of use	28
9	Verification of the conformity to the requirements and/or particular safety meas	
9.1	General	
9.2	Methods of examination	
9.2.1	General	
9.2.2	Visual check	
9.2.3	Measurement	
9.2.4	Functional test	28

9.2.5	Load test(s)	28
9.2.6	Specific verification/measurements and other controls	29
Anne	x A (normative) Special national conditions	30
Annex	x B (normative) Checklist for conformity	38
Anne	x C (informative) Technical details for buffing and draw gear	42
C.1	General	42
C.2	Draw gear constituent parts	42
C.2.1	Coupling part	42
C.2.2	Tow bar	42
C.2.3	Screw coupling	43
	Application	
C.4	User information	43
Biblio	ography	44

European foreword

This document (EN 15955-1:2025) 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 November 2025, and conflicting national standards shall be withdrawn at the latest by November 2025.

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.

This document supersedes EN 15954-1:2013 and EN 15955-1:2013.

Principal amended clauses compared to EN 15954-1:2013 and EN 15955-1:2013:

- general: all references updated to latest issue;
- 4.3: attachments with rail wheels clarified to be a trailer;
- Clause 5: clauses concerning machine profile, running safety, stability, structural strength, and failure recovery transferred to EN 15955-2:2025;
- 5.11: additional clause added for machines intended for urban rail for warning systems;
- 5.13.3: additional clause added for machines intended for urban rail for MEWP bonding;
- 5.19: additional clause added for machines intended for urban rail for emergency stopping devices;
- 5.23: additional clause added for demountable modules:
- 5.24: additional clause added for rated capacity indicator / rated capacity limiter (RCI/RCL);
- 5.25: additional clause added for climatic conditions in geographic areas;
- Clause 6: additional clause added for trailers used to carry machines;
- Clause 8: documentation requirements completely revised (was previously called 'User Information');
- Annex B: revised to suit new format and numbering.

EN 15955, Railway applications - Infrastructure - Demountable machines, trailers and associated equipment, is currently composed with the following parts:

- Part 1: Technical requirements for travelling and working;
- Part 2: General safety requirements.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia,

Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the scope of this document.

This document is the first of a series of two parts of the European Standard: *Railway applications* — *Track* — *Demountable machines, trailers and associated equipment,* dealing with railway specific risks of the demountable machines and trailers when travelling and working on railway infrastructures:

- Part 1 covers the safety and technical requirements for the machines in travelling and working modes, and is applicable for all machines, including those in operation on urban rail;
- Part 2 covers the safety requirements for the machines in travelling and working modes; this is a document harmonized with the European Machinery Directive 2006/42/EC.

Part 1 specifies requirements for approval of the machine for use on the railway. Depending on the decision of the infrastructure manager, Urban Rail Manager or the requirements in National rules the assessment of conformance could be undertaken by the Infrastructure/Urban Rail Manager concerned, by a third party assessor or by the manufacturer as a declaration of conformity.

Part 2 specifies requirements for the machine to be declared conformant by the manufacturer, except in the case of machines classified under Annex 4 of the Machinery Directive, which require a conformity check in conjunction with a notified body.

The hazards which exist in all mechanical, electrical, hydraulic, pneumatic and other components of machines and which are dealt with in the relevant European standards are not within the scope of this document. Where necessary, references are made to appropriate standards of this type.

1 Scope

This document specifies the requirements for demountable machines and trailers, including road-rail trailers – henceforward referred to as 'machines'.

NOTE 1 Trailers, including road-rail trailers, are considered as machines because they are moved along the track by powered machines.

This document specifies the requirements to deal with the common hazards presented by their use on the railway during transport, assembly and installation, commissioning, travelling and working on track, use including setting, programming, and process changeover, operation, cleaning, fault finding, maintenance and de-commissioning of the machines and associated equipment when they are used as intended and under conditions of misuse which are reasonably foreseeable.

These machines are not designed nor intended to operate signalling and control systems and are only designed and intended to work and travel under special operating conditions in accordance with those permitted by the infrastructure managers. These machines are not permitted to run on railway lines open to normal traffic.

NOTE 2 Other rail mounted railway maintenance and infrastructure inspection machines are dealt with in other European standards, see Technical Report CEN/TR 17498:2020.

This document is also applicable to machines and associated equipment that in working mode are partly supported on the ballast or the formation.

The requirements in this document are based on the assumption that the machines are used, operated and maintained by skilled person(s).

This document does not include the requirements for:

- quality of the work or performance of the machine;
- use of separate equipment temporarily mounted on machines;
- machines that utilize the overhead contact line system for traction purposes or as a power source;
- hazards due to air pressure caused by the passing of high-speed trains at more than 200 km/h;
- operation subject to special rules, e.g. potentially explosive atmospheres;
- hazards due to natural causes, e.g. earthquake, lightning, flooding;
- working methods;
- operation in severe working conditions requiring special measures, e.g. corrosive environments, contaminating environments, strong magnetic fields;
- hazards occurring when used to handle suspended loads which may swing freely.

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 14033-1:2017, Railway applications - Track - Railbound construction and maintenance machines - Part 1: Technical requirements for running

EN 14033-2:2017, Railway applications - Track - Railbound construction and maintenance machines - Part 2: Technical requirements for travelling and working

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

EN 15746-1:2020, Railway applications - Track - Road-rail machines and associated equipment - Part 1: Technical requirements for travelling and working

EN 15746-2:2020, Railway applications - Track - Road-rail machines and associated equipment - Part 2: General safety requirements

EN 15877-1:2012+A1:2018, Railway applications - Marking on railway vehicles - Part 1: Freight wagons

EN 15955-2:2025, Railway applications - Infrastructure - Demountable machines, trailers and associated equipment - Part 2: General safety requirements

EN 50121-3-1:2017,¹ Railway applications - Electromagnetic compatibility - Part 3-1: Rolling stock - Train and complete vehicle

EN 50122-1:2022, Railway applications - Fixed installations - Electrical safety, earthing and the return circuit - Part 1: Protective provisions against electric shock

EN 60529:1991,² Degrees of protection provided by enclosures (IP code) (IEC 60529:1989)

EN 62262:2002,³ Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code) (IEC 62262:2002)

EN ISO 12100:2010, Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)

EN ISO 13766-1:2018, Earth-moving and building construction machinery - Electromagnetic compatibility (EMC) of machines with internal electrical power supply - Part 1: General EMC requirements under typical electromagnetic environmental conditions (ISO 13766-1:2018)

_

¹ As impacted by EN 50121-3-1:2017/A1:2019.

² As impacted by EN 60529:1992/corrigendum May 1993, EN 60529:1992/A1:2000, EN 60529:1992/A2:2013, EN 60529:1992/A2:2013/AC:2019-02 and EN 60529:1992/AC:2016-02.

³ As impacted by EN 62262:2002/A1:2021.

EN ISO 13766-2:2018, Earth-moving and building construction machinery - Electromagnetic compatibility (EMC) of machines with internal electrical power supply - Part 2: Additional EMC requirements for functional safety (ISO 13766-2:2018)

ISO 16754:2008, Earth-moving machinery - Determination of average ground contact pressure for crawler machines

koniec náhľadu – text ďalej pokračuje v platenej verzii STN