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Railway applications - Braking - Requirements for the brake system of trains hauled by locomotives

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. 06/26

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English Version

**Railway applications - Braking - Requirements for the
brake system of trains hauled by locomotives**

Applications ferroviaires - Freinage - Exigences
concernant le système de freinage des trains tractés
par locomotive

Bahnanwendungen - Bremsen - Anforderungen an die
Bremsausrüstung lokbespannter Züge

This European Standard was approved by CEN on 22 September 2025.

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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.

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

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

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EN 14198:2026 (E)**European foreword**

This document (EN 14198:2026) 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of an identical text or by endorsement, at the latest by September 2026, and conflicting national standards shall be withdrawn at the latest by September 2026.

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 14198:2016+A2:2021.

This document includes the following significant technical changes with respect to EN 14198:2016+A2:2021:

- normative references have been updated;
- definitions have been modified;
- functional requirements at train level for brake modes and positions, for EP assist and for emergency brake application have been modified;
- requirements for direct brake have been modified;
- requirements for brake management have been modified;
- performance requirements for adhesion have been modified;
- Annex A “Vehicle requirements” has been modified;
- Annex D “Corresponding standards EN – UIC” has been updated;
- Annex E “Brake pipe pressure control system” has been updated;
- Annex F “Venting performance of emergency valves” has been updated;
- Annex ZA has been updated.

This document has been prepared under a Standardization Request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

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.

1 Scope

This document specifies basic requirements for the braking of trains hauled by locomotives.

This document is applicable for trains hauled by locomotives and vehicles intended for use in general operation or in fixed or predefined formation.

NOTE This ensures technical compatibility of the brake function between vehicles of various origins in a train (see 5.4).

If concerned, the EN-UIC brake architecture described in this document (see 5.4) is also applicable to brakes for multiple units and high-speed trains and urban rail described in the EN 16185 series and the EN 15734 series and the EN 13452 series respectively.

This document also takes into account electrical and electronic control functions and additional brake systems like dynamic brakes and adhesion independent brakes.

The brake system requirements, which are specific for railbound construction and maintenance machines are set out in EN 14033-1.

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 837-1:1996,¹ *Pressure gauges — Part 1: Bourdon tube pressure gauges — Dimensions, metrology, requirements and testing*

EN 10220:2002, *Seamless and welded steel tubes - Dimensions and masses per unit length*

EN 10305-4:2016, *Steel tubes for precision applications - Technical delivery conditions - Part 4: Seamless cold drawn tubes for hydraulic and pneumatic power systems*

EN 10305-6:2016, *Steel tubes for precision applications - Technical delivery conditions - Part 6: Welded cold drawn tubes for hydraulic and pneumatic power systems*

EN 14531-1:2015+A1:2018, *Railway applications - Methods for calculation of stopping and slowing distances and immobilization braking - Part 1: General algorithms utilizing mean value calculation for train sets or single vehicles*

EN 14531-2:2015, *Railway applications - Methods for calculation of stopping and slowing distances and immobilization braking - Part 2: Step by step calculations for train sets or single vehicles*

EN 14535-1:2019, *Railway applications - Brake discs for railway rolling stock - Part 1: Brake discs pressed or shrunk onto the axle or drive shaft, dimensions and quality requirements*

EN 14535-2:2019, *Railway applications - Brake discs for railway rolling stock - Part 2: Brake discs mounted onto the wheel, dimensions and quality requirements*

EN 14601:2024, *Railway applications - Straight and angled end cocks for brake pipe and main reservoir pipe*

EN 15220:2016, *Railway applications - Brake indicators*

¹ Document impacted by AC:1998.

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

EN 15328:2020+A1:2024, *Railway applications - Braking - Brake pads*

EN 15329:2019, *Railway applications - Braking - Brake block holder and brake block key*

EN 15355:2019+A1:2023, *Railway applications - Braking - Distributor valves and distributor-isolating devices*

EN 15595:2018+A1:2023, *Railway applications - Braking - Wheel slide protection*

EN 15611:2020+A1:2022, *Railway applications - Braking - Relay valves*

EN 15612:2020, *Railway applications - Braking - Brake pipe accelerator*

EN 15663:2017+A2:2024, *Railway applications - Vehicle reference masses*

EN 15807:2021, *Railway applications - Pneumatic half couplings*

EN 15877-1:2024, *Railway applications - Markings of railway vehicles - Part 1: Freight wagons*

EN 15877-2:2013, *Railway applications - Markings of railway vehicles - Part 2: External markings on coaches, motive power units, locomotives and on track machines*

EN 16186-2:2017, *Railway applications - Driver's cab - Part 2: Integration of displays, controls and indicators*

EN 16207:2024, *Railway applications - Braking - Functional and performance criteria of magnetic track brake systems for use in railway rolling stock*

EN 16241:2014+A1:2016, *Railway applications - Slack adjuster*

EN 16334-1:2014+A1:2022, *Railway applications - Passenger Alarm System - Part 1: System requirements for mainline rail*

EN 16451:2024, *Railway applications - Braking - Brake pad holder*

EN 16452:2015+A1:2019, *Railway applications - Braking - Brake blocks*

EN 16834:2019, *Railway applications - Braking - Brake performance*

EN 45545-1:2013, *Railway applications - Fire protection on railway vehicles - Part 1: General*

EN 45545-2:2020+A1:2023, *Railway applications - Fire protection on railway vehicles - Part 2: Requirements for fire behaviour of materials and components*

EN 45545-3:2024, *Railway applications - Fire protection on railway vehicles - Part 3: Fire resistance requirements for fire barriers*

EN 45545-4:2024, *Railway applications - Fire protection on railway vehicles - Part 4: Fire safety requirements for rolling stock design*

EN 45545-5:2013+A1:2015, *Railway applications - Fire protection on railway vehicles - Part 5: Fire safety requirements for electrical equipment including that of trolley buses, track guided buses and magnetic levitation vehicles*

EN 45545-6:2024, *Railway applications - Fire protection on railway vehicles - Part 6: Fire control and management systems*

EN 45545-7:2013, *Railway applications - Fire protection on railway vehicles - Part 7: Fire safety requirements for flammable liquid and flammable gas installations*

EN 50125-1:2014, *Railway applications - Environmental conditions for equipment - Part 1: Rolling stock and on-board equipment*

EN 50163:2004, *Railway applications - Supply voltages of traction systems*

EN 50553:2012,² *Railway applications — Requirements for running capability in case of fire on board of rolling stock*

EN ISO 1127:1996, *Stainless steel tubes - Dimensions, tolerances and conventional masses per unit length (ISO 1127:1992)*

EN ISO 24478:2024, *Railway applications - Braking - General vocabulary (ISO 24478:2023, including corrected version 2024-04)*

ISO 4975:2022, *Railway applications — Braking system — Quality of compressed air for pneumatic apparatus and systems*

ISO 20138-1:2018, *Railway applications — Calculation of braking performance (stopping, slowing and stationary braking) — Part 1: General algorithms utilizing mean value calculation*

ISO 24221:2024, *Railway applications — Braking system — General requirements*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN

² Document impacted by A1:2016, A2:2020 and AC:2013.