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Railway applications - Braking - Empty-loaded changeover devices

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This standard includes the English version of the European Standard.

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Railway applications - Braking - Empty-loaded changeover devices

Applications ferroviaires - Freinage - Dispositifs de changement de régime vide-chargé

Bahnanwendungen - Bremse - Leer-Beladen-Umstellvorrichtungen

This European Standard was approved by CEN on 20 December 2020.

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Bibliography		

EN 15624:2021 (E)**European foreword**

This document (EN 15624:2021) 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of an identical text or by endorsement, at the latest by August 2021, and conflicting national standards shall be withdrawn at the latest by August 2021.

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 15624:2008+A1:2010.

The main changes compared to EN 15624:2008+A1:2010 are:

- a) normative references have been updated;
- b) terms and definitions have been revised;
- c) requirements on design and manufacture have been revised;
- d) requirements on materials have been removed;
- e) requirements on type tests have been revised;
- f) requirements on routine test and inspection have been removed;
- g) requirements on type validation have been removed;
- h) requirements on in-service assessment have been added;
- i) requirements on installation validation and on documentation have been removed;
- j) requirements on designation, identification and marking have been revised;
- k) Annex ZA has been updated.

This document has been prepared under a standardization request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 2016/797/EU.

For relationship with EU Directive 2016/797/EU, see informative Annex ZA, which is an integral part of this document.

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, Turkey and the United Kingdom.

1 Scope

This document is applicable to empty-loaded changeover devices. The purpose of such devices is the generation of a load-related signal which causes the brake performance to be adjusted to the current vehicle mass.

The manually operated empty-loaded changeover devices change their output signal according to the position of the handles which together with the associated changeover plates serve as interfaces. The changeover plates read the required information for the operation of the empty-loaded changeover devices, i.e. brake weights for each position and the relevant changeover mass of the vehicle.

Automatic empty-loaded changeover devices sense a certain load threshold of the vehicle to automatically adjust the output signal when the mass of a vehicle reaches a defined value. This threshold is the changeover mass. Below this mass the vehicle's brake system provides a reduced brake force. For the changeover mass or more the high brake force applies.

This document specifies the requirements for the design, testing and quality assurance of empty-loaded changeover devices.

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 14478:2017, *Railway applications — Braking — Generic vocabulary*

EN 15625:2021, *Railway applications — Braking — Automatic variable load sensing devices*

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

EN 45545-2:2020, *Railway applications — Fire protection on railway vehicles — Part 2: Requirements for fire behavior of materials and components*

EN 60721-3-5:1997, *Classification of environmental conditions — Part 3: Classification of groups of environmental parameters and their severities — Section 5: Ground vehicle installations (IEC 60721-3-5:1997)*

EN 61373:2010, *Railway applications — Rolling stock equipment — Shock and vibration tests (IEC 61373:2010)*

EN ISO 228-1:2003, *Pipe threads where pressure-tight joints are not made on the threads — Part 1: Dimensions, tolerances and designation (ISO 228-1:2000)*

ISO 8573-1:2010, *Compressed air — Part 1: Contaminants and purity classes*

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