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Railway applications - Rolling stock - Head stock layout

## EESTI STANDARDI EESSÕNA

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English Version

## Railway applications - Rolling stock - Head stock layout

Applications ferroviaires - Matériel roulant ferroviaires  
- Agencement de la traverse de tête

Bahnanwendungen - Schienenfahrzeuge - Anordnung  
der Bauteile am Kopfstück

This European Standard was approved by CEN on 10 July 2022.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
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EUROPÄISCHES KOMITEE FÜR NORMUNG

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

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## European foreword

This document (EN 16839:2022) 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of an identical text or by endorsement, at the latest by February 2023, and conflicting national standards shall be withdrawn at the latest by February 2023.

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 16839:2017.

United Kingdom has a national deviation, which is included in Annex D.

The main changes resulting from this document will be incorporated as modifications to EN 16839:2017:

- a) Adaptation of the document with regard to overlapping contents to EN 15551 and EN 15566;
- b) Revision of Figure 1 – Free spaces;
- c) Revision of Figure 3 – Buffer and drilling template for wagon;
- d) Revision of Figure 7 in 6.3 "Clearances around the draw hook" with consideration of the necessary clearance for mounting the rescue coupler on locomotives;
- e) Complete revision of Clause 9 "Electrical connections" including the figures;
- f) New Annex F "Calculation of space for shunter (Berne Rectangle) in curves when using screw couplings" – adopted from EN 16116-2;
- g) Adaptation of Annex ZA to EU Directive 2016/797/EC;
- h) Adaptation of normative references and editorial revision.

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(s) / Regulation(s).

For relationship with EU Directive(s) / Regulation(s), 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, Turkey and the United Kingdom.

## 1 Scope

This document is applicable to vehicles equipped with buffers and screw coupling systems.

In order to allow operation and coupling of trainsets or vehicles, this document specifies the defined free space for the shunter called the “Berne rectangle” and the necessary free space for the installation of the rescue coupler.

This document specifies the location, fixing, and free spaces on the headstock of:

- buffers;
- screw coupling systems;
- end cocks;
- pneumatic half couplings;
- connections for electric cables.

It also specifies the calculation of the width of the buffer heads.

Unless otherwise displayed, all dimensions given in this document are nominal values.

## 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 14601:2005+A2:2021, *Railway applications - Straight and angled end cocks for brake pipe and main reservoir pipe*

EN 15020:2022, *Railway applications — Rescue coupler — Performance requirements, specific interface geometry and test methods*

EN 15551:2022, *Railway applications — Railway rolling stock — Buffers*

EN 15566:2022, *Railway applications — Railway rolling stock — Draw gear and screw coupling*

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

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

EN 16286-1:2013, *Railway applications - Gangway systems between vehicles - Part 1: Main applications*

EN 60529:1991, *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989)*<sup>1</sup>

ISO 3864 (all parts),<sup>2</sup> *Graphical symbols — Safety colours and safety signs*

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<sup>1</sup> Document impacted by EN 60529:1991/A1:2000, EN 60529:1991/A2:2013 and EN 60529:1991/A2:2013/COR1:2019.

<sup>2</sup> Consists of the following parts: ISO 3864-1:2011, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs and safety markings*; ISO 3864-2:2016, *Graphical symbols — Safety colours and safety signs — Part 2: Design principles for product safety labels*; ISO 3864-3:2012, *Graphical symbols — Safety colours and safety signs — Part 3: Design principles for graphical symbols for use in safety signs* ISO 3864-4:2011,