



**SLOVENSKI STANDARD**  
**oSIST prEN 15329:2017**  
**01-junij-2017**

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**Železniške naprave - Zavore - Nosilec zavorne ploščice in zavorni ključ**

Railway applications - Braking - Brake block holder and brake block key

Bahnanwendungen - Bremsen - Bremsklotzhalter und Bremsklotzkeil

Applications ferroviaires - Freinage - Porte-semelles et clavette de semelle et clavette de semelle de frein

**Ta slovenski standard je istoveten z: prEN 15329**

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**ICS:**

45.040

Materiali in deli za železniško  
tehniko

SIST EN 15329:2019

Materials and components  
for railway engineering

**oSIST prEN 15329:2017**

**en,fr,de**



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NORME EUROPÉENNE  
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English Version

## Railway applications - Braking - Brake block holder and brake block key

Applications ferroviaires - Freinage - Porte-semelles et clavette de semelle et clavette de semelle de frein

Bahnanwendungen - Bremsen - Bremsklotzhalter und Bremsklotzkeil

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 256.

If this draft becomes a European Standard, 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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**prEN 15329:2017 (E)****European foreword**

This document (prEN 15329:2017) has been prepared by Technical Committee CEN/TC 256 “Railway applications”, the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 15329:2015.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 2008/57/EC.

For relationship with EU Directive 2008/57/EC, see informative Annex ZA, which is an integral part of this document.

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## Introduction

The requirements of this European standard cannot be laid down in such detail as to ensure defect-free design and production without obstructing further development. It is therefore essential for each manufacturer himself to take all requisite steps to ensure on his part that the quality of design and production are state of the art.

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## 1 Scope

This draft European standard applies to brake block holders and brake block keys included in brake rigging installed on railway vehicles.

Brake block holders and brake block keys made of non-ferrous materials are not subject to this draft European standard.

This draft European standard contains requirements for design and evaluation testing of conformity.

The requirements contained in this draft European standard apply to the brake block holders and brake block keys with which the railway vehicles of main-line railways and private railways (regional railways, company railways) are fitted.

## 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 10204, *Metallic products — Types of inspection documents*

EN 14478, *Railway applications — Braking — Generic vocabulary*

EN 15085 (all parts), *Railway applications — Welding of railway vehicles and components*

EN 16452, *Railway applications - Braking — Brake blocks*

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

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)*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 14478, EN 16452 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

### 3.1

#### **brake block key**

securing element for the brake block in the brake block holder

### 3.2

#### **brake block with low coefficient of friction**

composite (organic or sinter) brake blocks material type L or LL as defined in EN 16452 and cast iron brake block material

### 3.3

#### **brake block with high coefficient of friction**

composite (organic or sinter) brake blocks material type K as defined in EN 16452



**3.4****single brake block holder**

brake block holder suitable to one brake block typically length of 320 mm; corresponds to “Bg” configuration

**3.5****double brake block holder**

brake block holder suitable to two brake blocks typically length of 250 mm; corresponds to “Bgu” configuration

**3.6****integrated brake rigging**

brake rigging considered as a part of brake actuator

**3.7****non-integrated brake rigging**

independent brake rigging

Note 1 to entry: Known as “standard rigging”.

**4 Symbols and abbreviations****4.1 Symbols**

For the purposes of this document, the following symbols apply.

**Table 1 — Symbols and units**

Symbol	Description	Unit
$F_{bmax}$	Maximum application force in service = maximum pneumatic application force + overlapping parking brake force, overlapping is to be considered if overlapping is a normal mode)	kN
$F_{Pr}$	Test force	kN
$F_{Prdyn}$	Dynamic test force	kN
$F_{Prm}$	Dynamic mean force	kN
$h$	Pitch before deflection test	mm
$L_S$	Span during deflection test	mm

**4.2 Abbreviations**

For the purposes of this document, the following abbreviations apply.

MP magnetic particle testing

US Ultrasound

**5 Materials****5.1 General**

The ferrous materials used for the manufacturing of brake block holders and their components shall comply with relevant standards of material (as for instance welded design shall be in accordance with EN 15085).

Declaration of conformity with standards (e.g. with EN 10204 or internal specification) shall be provided.

**prEN 15329:2017 (E)****5.2 Material for brake block holder**

The brake block holders shall be produced from one of the following:

- steel (cast, forged, rolled or welded);
- grey or nodular cast iron.

**5.3 Material for brake block key**

The selection of the material and the manufacturing process are free and shall comply with the technical specifications and/or the drawings.

**5.4 Corrosion protection**

If corrosion protection is applied, it shall not contain any components constituting a hazard for the staff coming into contact with them. Should paint colouring be applied, care shall be taken to ensure that bearing points for bolts, bushes and moving parts are free from paint.

**6 Design****6.1 Environmental conditions****6.1.1 General**

For vehicles used in “general operation” or “go everywhere” (Various formations of vehicles, from different origins: train formation not defined at design stage) and using non-integrated brake rigging, all the environmental requirements listed shall be taken into account within the design concept of the components. However only the assessment tests listed in Clause 8 shall be performed. The remaining proofs are to be presented in the declarations of conformity.

For other vehicles any deviation on below environmental conditions is allowed. Any special requirement shall be defined in a specification.

**6.1.2 Ambient temperature**

The brake component shall be able to operate within the temperature class TX in accordance with EN 50125-1, where the upper limit for TX shall be raised up to +70 °C for the external air temperature.

**6.1.3 External air humidity**

The following humidity levels shall be considered for the external environment (EN 50125-1:2014, 4.4):

- yearly average: 75 % relative humidity;
- on 30 days in the year continuously: between 75 % and 95 % relative humidity;
- on the other days occasionally: between 95 % and 100 % relative humidity;
- maximum absolute humidity: 30 g/m<sup>3</sup> occurring in tunnels.

**6.1.4 Rain**

Rain rate of 6 mm/min shall be taken into account. The effect of rain shall be considered depending on the possible equipment installation together with wind and vehicle movement.