

## **Railway applications - Suspension Components - Air spring control elements**

Railway applications - Suspension components - Air  
spring control elements

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 14817:2006 sisaldab Euroopa standardi EN 14817:2006 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 29.05.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 14817:2006 consists of the English text of the European standard EN 14817:2006.</p> <p>This document is endorsed on 29.05.2006 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This standard specifies:- the characteristics the air brake control elements shall have and the tests to be carried out;- the guidelines for drafting the approval procedure applied by the customer;- the guidelines for drafting the qualification procedure for the product based on the requirements specified;- the guidelines for drafting the quality surveillance provisions for the manufacture of the air spring control elements.</p>	<p><b>Scope:</b></p> <p>This standard specifies:- the characteristics the air brake control elements shall have and the tests to be carried out;- the guidelines for drafting the approval procedure applied by the customer;- the guidelines for drafting the qualification procedure for the product based on the requirements specified;- the guidelines for drafting the quality surveillance provisions for the manufacture of the air spring control elements.</p>
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ICS 45.040

Võtmesõnad:

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English Version

## Railway applications - Suspension components - Air spring control elements

Applications ferroviaires - Pièces de suspension - Eléments  
de commande de ressort pneumatique

Bahnanwendungen - Federungselemente -  
Luftfedersteuerglieder

This European Standard was approved by CEN on 9 January 2006.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

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## Foreword

This European Standard (EN 14817:2006) 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 October 2006, and conflicting national standards shall be withdrawn at the latest by October 2006.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Romania, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

## Introduction

Designing an air spring control element initially requires knowledge of the mechanical system into which it is integrated. From this come the performance requirements specific to each case that only the customer is able to specify.

The requirements of the standard should be applied jointly to the supply conditions for the air spring control elements.

This standard puts into concrete form the studies and work carried out to improve the performance and quality of the air spring control elements in order to meet the requirements of modern rail transport equipment.

This standard is intended for the users of rail networks, manufacturers and suppliers of rail equipment and suppliers of air brake control elements.

## 1 Scope

This standard specifies:

- the characteristics the air brake control elements shall have and the tests to be carried out;
- the guidelines for drafting the approval procedure applied by the customer;
- the guidelines for drafting the qualification procedure for the product based on the requirements specified;
- the guidelines for drafting the quality surveillance provisions for the manufacture of the air spring control elements.

The requirements of this standard are applicable to air spring control elements having to equip rail vehicles operating on a reserved track under permanent guidance without any distinction between the nature or the route of the track.

It covers complete control elements. It is essential that the various components are defined by particular specifications.

This standard specifies:

- the differential valves;
- the filters;
- the levelling valves;
- the non-return valves;
- the minimum pressure valves;
- the pressure-reducing valves;
- the end stop valves;
- the isolating valves.

This standard does not take into account the other air suspension control elements such as the installation of pipes, pipework elements and air production elements.



## 2 Normative references

The following referenced documents are indispensable for the application 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 50102, *Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)*

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

ISO 31-1, *Quantities and units – Part 1: Space and time*

ISO 31-3, *Quantities and units – Part 3: Mechanics*

ISO 1219-1, *Fluid power systems and components – Graphic symbols and circuit diagrams – Part 1: Graphic symbols*

ISO 8573-1, *Compressed air for general use – Part 1: Contaminants and quality classes*

ISO 9227, *Corrosion tests in artificial atmospheres – Salt spray tests*

ISO 10209-1, *Technical product documentation – Vocabulary - Part 1: Terms relating to technical drawings - General and types of drawings*

## 3 Terms, definitions, symbols and abbreviations

### 3.1 Terms and definitions

For the purposes of this European Standard, the following terms and definitions apply.

#### 3.1.1

##### **differential valve**

appliance whose basic function is to permit a flow of air between two air springs of the same bogie when their pressure differential is greater than a specified threshold

#### 3.1.2

##### **filter**

appliance whose basic function is to catch the pollutants in the compressed air

#### 3.1.3

##### **levelling valve**

appliance whose basic function is to maintain the height of an air spring at a predetermined constant value whatever the static load applied whilst admitting or discharging air

#### 3.1.4

##### **end stop valve**

appliance whose basic function is to limit the height of an air spring to a predetermined value by purging it rapidly into the atmosphere

#### 3.1.5

##### **minimum pressure valve**

appliance whose basic function is to admit an air flow in one single direction above a given pressure