

RAUDTEEALASED RAKENDUSED. PIDURITE
HOOBÜLEKANDER REGULAATOR

Railway applications - Slack adjuster

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 16241:2014+A1:2016 sisaldab Euroopa standardi EN 16241:2014+A1:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 16241:2014+A1:2016 consists of the English text of the European standard EN 16241:2014+A1:2016.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 02.11.2016.	Date of Availability of the European standard is 02.11.2016.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 45.040

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

English Version

Railway applications - Slack adjuster

Applications ferroviaires - Régleur de timonerie

Bahnanwendungen - Gestängesteller

This European Standard was approved by CEN on 16 November 2013 and includes Amendment 1 approved by CEN on 8 August 2016.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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



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

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

Contents

Page

European foreword.....	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 Design and manufacture.....	6
4.1 Requirements	6
4.1.1 General.....	6
4.1.2 Maintenance of block to tread clearance.....	6
4.1.3 Take up	6
4.1.4 Pay out.....	6
4.1.5 Shock and Vibration	7
4.1.6 Space envelope.....	7
4.1.7 Maximum load absorption.....	9
4.2 Service life.....	9
4.3 Ambient temperature.....	10
4.4 Other environmental conditions	10
4.4.1 General.....	10
4.4.2 Humidity.....	10
4.4.3 Rain	10
4.4.4 Snow, ice and hail.....	11
4.4.5 Solar radiation	11
4.4.6 Resistance to pollution.....	11
4.5 External appearance	11
5 Materials.....	11
6 Type test methods.....	12
6.1 Sampling for type test.....	12
6.2 Test requirements	12
6.3 Test procedure	12
6.3.1 Principle	12
6.3.2 Check of physical and geometrical characteristics	12
6.3.3 Operation	12
6.3.4 Operation at extreme temperatures	14
6.3.5 Maximum load absorption.....	14
6.3.6 Life test.....	14
6.4 Approval validity	15
6.5 Test Report	15
7 Routine test	15
8 In-Service assessment	15
9 Designation.....	16
10 Identification and marking.....	16
Annex A (informative) In-service trial.....	17

A.1	General	17
A.2	Test set-up and sampling.....	17
A.3	Procedure	17
A.4	Pass/fail criteria	17
Annex ZA (informative)	Relationship between this European Standard and the Essential Requirements of EU Directive 2008/57/EC.....	18
Bibliography		20

European foreword

This document (EN 16241:2014+A1:2016) 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 May 2017, and conflicting national standards shall be withdrawn at the latest by May 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document includes Amendment 1 approved by CEN on 2016-08-08.

This document supersedes EN 16241:2014.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** and **A1**.

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.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard establishes general principles for designing, manufacturing and type testing slack adjusters.

NOTE 1 These requirements cannot be written in sufficient detail to ensure good workmanship or proper construction. Each manufacturer is therefore responsible for taking every necessary step to make sure that the quality of workmanship and construction is such as to ensure accordance with good engineering practice.

It is applicable to double acting slack adjusters designed to control the block (shoe) to tread (wheel) clearance of tread braked vehicles with conventional brake cylinders and rigging, without taking the track-gauge into consideration.

NOTE 2 The term used for this device by UIC is "Brake rigging adjuster".

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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*

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

3 Terms and definitions

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

3.1

tread

surface of a monobloc wheel or of a separate tread on which the brake block rubs

3.2

slack adjuster

device to compensate for wear of brake shoes, wheel treads, and brake rigging pivots to maintain a nominal block to tread clearance

Note 1 to entry: These slack adjusters are fitted separately in the brake rigging as independent devices. These slack adjusters are sometimes referred to as regulators.

3.3

double acting

works in two directions to take up excessive clearance between the brake block and tread or pay out to allow the nominal clearance to be restored between the brake block and tread where this is reduced

3.4

take up

reduction in the length of the brake rigging caused by the operation of the slack adjuster