

This document is a preview generated by EVS

Railway applications - Straight and angled end cocks
for brake pipe and main reservoir pipe

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

| | |
|---|--|
| See Eesti standard EVS-EN 14601:2005+A2:2021 sisaldab Euroopa standardi EN 14601:2005+A2:2021 ingliskeelset teksti. | This Estonian standard EVS-EN 14601:2005+A2:2021 consists of the English text of the European standard EN 14601:2005+A2:2021. |
| 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 and Accreditation. |
| Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 08.12.2021. | Date of Availability of the European standard is 08.12.2021. |
| Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest. | The standard is available from the Estonian Centre for Standardisation and Accreditation. |

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

ICS 45.060.01

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardimis- ja Akrediteerimiskeskusele

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

Kui Teil on küsimusi standardite autoriõiguse kaitse kohta, võtke palun ühendust Eesti Standardimis- ja Akrediteerimiskeskusega: 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 and Accreditation

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 and Accreditation.

If you have any questions about standards copyright protection, please contact the Estonian Centre for Standardisation and Accreditation: Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

EUROPEAN STANDARD

EN 14601:2005+A2

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2021

ICS 45.060.01

Supersedes EN 14601:2005+A1:2010

English Version

Railway applications - Straight and angled end cocks for brake pipe and main reservoir pipe

Applications ferroviaires - Robinets d'arrêt droit ou
coudé pour conduite générale de frein et conduite
principale

Bahnanwendungen - Gerade und abgewinkelte
Luftabsperrhähne für die Hauptluftleitung und
Hauptbehälterleitung

This European Standard was approved by CEN on 30 August 2010 and includes Amendment 2 approved by CEN on 4 October 2021.

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, 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 United Kingdom.



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

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

| Contents | Page |
|--|-------------|
| Foreword | 4 |
| 1 Scope | 5 |
| 2 Normative references | 5 |
| 3 Terms and definitions | 5 |
| 4 Requirements | 10 |
| 4.1 General | 10 |
| 4.2 Operating conditions | 10 |
| 4.3 Functional characteristics | 11 |
| 4.3.1 General | 11 |
| 4.3.2 Open and closed positions | 11 |
| 4.3.3 Lubrication | 11 |
| 4.3.4 Venting port | 11 |
| 4.3.5 Torque | 11 |
| 4.3.6 Spindle handle of the end cock | 11 |
| 4.3.7 Fall time | 12 |
| 4.3.8 Leakage | 12 |
| 4.3.9 Vacuum withstanding | 12 |
| 4.3.10 Pneumatic shocks | 13 |
| 4.4 Constructional characteristics | 13 |
| 4.4.1 External appearance | 13 |
| 4.4.2 Connections | 13 |
| 4.4.3 Space envelope | 13 |
| 4.4.4 Mechanical shocks | 13 |
| 4.4.5 Resistance to torque | 13 |
| 4.4.6 Life expectancy | 13 |
| 5 Type test methods | 13 |
| 5.1 Sampling for type test | 13 |
| 5.2 Test requirements | 14 |
| 5.3 Test procedure | 14 |
| 5.3.1 Principle | 14 |
| 5.3.2 Check of physical and geometrical characteristics | 15 |
| 5.3.3 Measurement of the operating torque | 15 |
| 5.3.4 Measurement of the pressure fall time | 15 |
| 5.3.5 Hydraulic test (water pressure) of the end cock body at given pressure | 17 |
| 5.3.6 Operating test under air flow condition | 18 |
| 5.3.7 Pneumatic test of the isolating device at given pressures and temperatures | 18 |
| 5.3.8 Endurance at ambient temperature with reduced air flow | 20 |
| 5.3.9 Measurement of the operating torque drift | 21 |
| 5.3.10 Vibration test | 21 |
| 5.3.11 Resistance to shock test | 21 |
| 5.3.12 Vacuum test | 22 |
| 5.3.13 Corrosion test | 23 |
| 5.3.14 Resistance to torque | 23 |
| 5.3.15 Examination | 25 |

| | | |
|-------|--|----|
| 5.4 | Approval validity..... | 25 |
| 5.5 | Type test report..... | 25 |
| 6 | Homologation..... | 25 |
| 6.1 | General..... | 25 |
| 6.1.1 | Procedure..... | 25 |
| 6.1.2 | Pass/fail criteria..... | 26 |
| 6.2 | Homologation test report..... | 26 |
| 7 | Routine tests..... | 26 |
| 8 | Designation..... | 26 |
| 9 | Marking..... | 27 |
| | Annex A (normative) Dimensions of end cocks..... | 28 |
| | Bibliography..... | 32 |

Foreword

This document (EN 14601:2005+A2:2021) 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 June 2022, and conflicting national standards shall be withdrawn at the latest by June 2022.

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 2010-08-30.

This document includes Amendment 2, approved by CEN on 2021-10-04.

This document supersedes A2 EN 14601:2005+A1:2010 A2.

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

The start and finish of text introduced or altered by amendment is indicated in the text by tags A2 A2.

A2 Deleted paragraphs A2

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 European Standard is applicable to manually operated end cocks designed to cut-off the brake pipe and the main reservoir pipe of the air brake and compressed air system of rail vehicles; without taking the type of vehicles and track-gauge into consideration.

This European Standard specifies requirements for the design, dimensions, testing and certification (qualification and/or homologation), and marking.

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 50125-1, *Railway applications — Environmental conditions for equipment — Part 1: Equipment on board rolling stock*

EN 61373, *Railway applications — Rolling stock equipment — Shock and vibration tests (IEC 61373:1999)*

EN ISO 228-2, *Pipe threads where pressure-tight joints are not made on the threads — Part 2: Verification by means of limit gauges (ISO 228-2:1987)*

ISO 5208:1993, *Industrial valves — Pressure testing of valves*

ISO 8573-1:2001, *Compressed air — Part 1: Contaminants and purity classes*

ISO 9227:1990, *Corrosion tests in artificial atmospheres — Salt spray tests*

3 Terms and definitions

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

3.1

end cock

two position, three way cock, with no piped vent and, with a rotary spindle moved by the operating handle

3.2 Components

3.2.1

port

terminus of a fluid passage in a component (to which may be connected pipelines) for the transmission of fluid to, or from the component

3.2.1.1

venting port

port which provides passage to atmosphere

3.2.1.2

outlet port

port which is vented to atmosphere when the cock is closed