SVENSK STANDARD SS-EN 60534-2-3

Fastställd	Utgåva	Sida	Ansvarig kommitté
2016-06-29	3	1 (1+44)	SEK TK 65

Industriell processtyrning – Reglerventiler – Del 2-3: Flödeskapacitet – Provningsmetoder

Industrial-process control valves – Part 2-3: Flow capacity – Test procedures

Som svensk standard gäller europastandarden EN 60534-2-3:2016. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60534-2-3:2016.

Nationellt förord

Europastandarden EN 60534-2-3:2016

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 60534-2-3, Third edition, 2015 - Industrial-process control valves - Part 2-3: Flow capacity - Test procedures**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 60534-2-3, utgåva 2, 1998, gäller ej fr o m 2019-01-20.

ICS 23.060.40; 25.040.40

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Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

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Stora delar av arbetet sker internationellt

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Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60534-2-3

April 2016

ICS 23.060.40; 25.040.40

Supersedes EN 60534-2-3:1998

English Version

Industrial-process control valves - Part 2-3: Flow capacity - Test procedures (IEC 60534-2-3:2015)

Vannes de régulation des processus industriels - Partie 2-3: Capacité d'écoulement - Procédures d'essais (IEC 60534-2-3:2015)

Stellventile für die Prozessregelung - Teil 2-3: Durchflusskapazität - Prüfverfahren (IEC 60534-2-3:2015)

This European Standard was approved by CENELEC on 2016-01-20. CENELEC 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 CENELEC 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 CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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

Ref. No. EN 60534-2-3:2016 E

SEK Svensk Elstandard

European foreword

The text of document 65B/1025/FDIS, future edition 3 of IEC 60534-2-3, prepared by SC 65B “Measurement and control devices” of IEC/TC 65 “Industrial-process measurement, control and automation" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60534-2-3:2016.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2016-10-20
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2019-01-20

This document supersedes EN 60534-2-3:1998.

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

Endorsement notice

The text of the International Standard IEC 60534-2-3:2015 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 60751:2008	NOTE	Harmonized as EN 60751:2008 (not modified).

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu

Publication	Year	Title	EN/HD	Year
IEC 60534-1	-	Industrial-process control valves - Part 1: Control valve terminology and general considerations	EN 60534-1	-
IEC 60534-2-1	2011	Industrial-process control valves - Part 2-1: Flow capacity - Sizing equations for fluid flow under installed conditions	EN 60534-2-1	2011
IEC 60534-8-2	-	Industrial-process control valves - Part 8-2: Noise considerations - Laboratory measurement of noise generated by hydrodynamic flow through control valves	EN 60534-8-2	-
IEC 61298-1	-	Process measurement and control devices - General methods and procedures for evaluating performance - Part 1: General considerations	EN 61298-1	-
IEC 61298-2	-	Process measurement and control devices - General methods and procedures for evaluating performance - Part 2: Tests under reference conditions	EN 61298-2	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INDUSTRIAL-PROCESS CONTROL VALVES –

Part 2-3: Flow capacity – Test procedures

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 60534-2-3 has been prepared by subcommittee 65B: Measurement and control devices, of IEC technical committee 65: Industrial-process measurement, control and automation.

The third edition cancels and replaces the second edition published in 1997, of which it constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) Addition of informative Annexes B, C, D, E and F.
b) Organizational and formatting changes were made to group technically related subject matter.

The text of this standard is based on the following documents:

FDIS	Report on voting
65B/1025/FDIS	65B/1028/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 60534 series, published under the general title *Industrial-process control valves*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INDUSTRIAL-PROCESS CONTROL VALVES –

Part 2-3: Flow capacity – Test procedures

1 Scope

This part of IEC 60534 is applicable to industrial-process control valves and provides the flow capacity test procedures for determining the following variables used in the equations given in IEC 60534-2-1:

a) flow coefficient C;

b) liquid pressure recovery factor without attached fittings F_L;

c) combined liquid pressure recovery factor and piping geometry factor of a control valve with attached fittings F_{LP};

d) piping geometry factor F_P;

e) pressure differential ratio factors x_T and x_{TP};

f) valve style modifier F_d;

g) Reynolds number factor F_R.

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.

IEC 60534-1, *Industrial-process control valves – Part 1: Control valve terminology and general considerations*

IEC 60534-2-1:2011, *Industrial-process control valves – Part 2-1: Flow capacity – Sizing equations for fluid flow under installed conditions*

IEC 60534-8-2, *Industrial-process control valves – Part 8-2: Noise considerations – Laboratory measurement of noise generated by hydrodynamic flow through control valves*

IEC 61298-1, *Process measurement and control devices – General methods and procedures for evaluating performance – Part 1: General considerations*

IEC 61298-2, *Process measurement and control devices – General methods and procedures for evaluating performance – Part 2: Tests under reference conditions*