SVENSK STANDARD

SS-EN IEC 62309, utg 2:2025

Fastställd	Sida	Ansvarig kommitté
2025-10-22	1 (36)	SEK TK 56

Tillförlitlighet hos produkter som innehåller återanvända komponenter – Fordringar för funktionalitet och provning

Dependability of products containing reused parts –
Requirements for functionality and tests

Som svensk standard gäller europastandarden EN IEC 62309:2025. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 62309:2025.

Nationellt förord

Europastandarden EN IEC 62309:2025

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 62309, Second edition, 2024 - Dependability of products containing reused parts - Requirements for functionality and tests**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 62309, utg 1:2008 med eventuella tillägg, ändringar och rättelser gäller ej fr o m 2028-01-31.

ICS 03.120.30; 21.020.00

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
Postadress: Box 1042, 172 21 Sundbyberg
Telefon: 08 - 444 14 00.
E-post: sek@elstandard.se. Internet: elstandard.se

Standarder underlättar utvecklingen och höjer elsäkerheten

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.

Genom att utforma sådana standarder blir säkerhetsfordringar tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

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.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK Svensk Elstandard

Box 1042
172 21 Sundbyberg
Tel 08-444 14 00
elstandard.se

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 62309

January 2025

ICS 03.120.30; 21.020

Supersedes EN 62309:2004

English Version

Dependability of new products containing reused parts and life-extended products (IEC 62309:2024)

Sûreté de fonctionnement des produits neufs contenant des composants réutilisés et des produits à durée de vie prolongée (IEC 62309:2024)

Zuverlässigkeit von Produkten mit wieder verwendeten Teilen und Produkten mit verlängerter Gebrauchsdauer (IEC 62309:2024)

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

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

Ref. No. EN IEC 62309:2025 E

SEK Svensk Elstandard

SS-EN IEC 62309, utg 2:2025

European foreword

The text of document 56/2057/FDIS, future edition 2 of IEC 62309, prepared by TC 56 "Dependability" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62309:2025.

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) 2026-01-31
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2028-01-31

This document supersedes EN 62309:2004 and all of its amendments and corrigenda (if any).

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

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 62309:2024 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standard indicated:

IEC 62402:2019	NOTE	Approved as EN IEC 62402:2019 (not modified)
ISO 9000:2015	NOTE	Approved as EN ISO 9000:2015 (not modified)
IEC 60300-1	NOTE	Approved as EN IEC 60300-1
IEC 60300-3-1:2003	NOTE	Approved as EN 60300-3-1:2004 (not modified)
ISO 9001:2015	NOTE	Approved as EN ISO 9001:2015 (not modified)
IEC 60300-3-14:2004	NOTE	Approved as EN 60300-3-14:2004 (not modified)
IEC 63000:2016	NOTE	Approved as EN IEC 63000:2018 (not modified)
IEC 61709:2017	NOTE	Approved as EN 61709:2017 (not modified)
IEC 60706-5:2007	NOTE	Approved as EN 60706-5:2007 (not modified)
IEC 61649:2008	NOTE	Approved as EN 61649:2008 (not modified)

IEC 62309

Edition 2.0 2024-12

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Dependability of new products containing reused parts and life-extended products

Sûreté de fonctionnement des produits neufs contenant des composants réutilisés et des produits à durée de vie prolongée

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
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INTERNATIONALE

ICS 03.120.30, 21.020

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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DEPENDABILITY OF NEW PRODUCTS CONTAINING REUSED PARTS AND LIFE-EXTENDED PRODUCTS

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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IEC 62309 has been prepared by IEC technical committee 56: Dependability. It is an International Standard.

This second edition cancels and replaces the first edition published in 2004. This edition constitutes a technical revision.

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

a) the previous Annex A has been separated into Annex B (Dependability aspects) and Annex C (Example with QAGAN parts);
b) a new normative Annex A has been written with expansion of lifecycle activities, to describe extending the useful life by refurbishment, life extension, updating, upgrading and second-hand use;
c) revision of Figure 1 accordingly;

d) minor editorial alignments throughout the document;

e) the abbreviation "quagan" has been changed "QAGAN" to reflect more contemporary use.

The text of this International Standard is based on the following documents:

Draft	Report on voting
56/2057/FDIS	56/2073/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

INTRODUCTION

The marketplace for products in the 21st century is a rapidly changing one, with increased speed of technological growth, and new pressures on environmental sustainability as humanity's demand for ecological resources currently far exceeds what the Earth can regenerate in the same timeframe.

Owing to the improving quality of manufacturing, most parts have been manufactured with a life expectancy far longer than the user needs.

Technological changes are also making products more reliable. However, commercial pressures and legislation changes are leading to an increased rate of technological change, resulting in a difficulty in obtaining supplies, spares and or support for the superseded parts [a discipline known as obsolescence management (see IEC 62402 [1][1])], and the need to upgrade systems before all their parts have reached their life expectancy.

The disposal of products and their component parts, which can be potentially useful, is fuelling the cycle of waste and the overuse of finite materials.

It is unlikely that the speed of technological growth can be slowed, or significant changes can be made to user needs. However, what can be done is to increase the reuse of parts that have not reached their life expectancy. This document addresses this goal to reduce waste by reusing parts, and the additional benefits that come with reusing parts.

This document provides customers with dependability assurance when manufacturers are producing new products containing previously used parts. The main concept is to qualify the reused parts to ensure that the product under consideration will fulfil the requirements for a product containing only new parts. The reused parts can then be declared QAGAN (qualified-as-good-as-new) and used interchangeably with new parts in the product.

This document firstly describes, in Clauses 4 to 7, requirements for qualification of reuse of parts in new products. A QAGAN part is qualified only for a specific application, often the same or similar to that for which it was previously used. This means that QAGAN parts are not declared as qualified for general use.

QAGAN parts are already type approved for their original application. The declaration QAGAN certifies that a reused part that has previously been qualified for use in a specific product has been checked that it has not deteriorated to a degree that it cannot be used in new products. A new product containing QAGAN parts is tested only to the same extent as if it contained only new parts.

Secondly, in Clauses A.3 to A.7, this document describes the life extension of products already in use. In most cases, life extension can be made using new components, new parts, or QAGAN parts that have been qualified for the specific application.

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1 Numbers in square brackets refer to the Bibliography.

Reuse of parts and materials is one way to save resources. Another way is to extend the useful life of products as described in Annex A, extending the useful life by refurbishment, life extension, updating, upgrading or second-hand use. These concepts are defined and the requirements for using the term QAGAN with reference to this document are stated. This document expresses guidance to support the circular economy and anticipates application by organisations to enable, permit and encourage reuse of functional parts. This document envisages that the item, the subject under consideration, which attracts the declaration or designation "QAGAN" may be an individual part, component, device, or functional unit. This document does not cover reused materials or large structures and large systems, nor does it cover software products, concepts, and ideas.

DEPENDABILITY OF NEW PRODUCTS CONTAINING REUSED PARTS AND LIFE-EXTENDED PRODUCTS

1 Scope

This International Standard introduces the concept to check the reliability and functionality of reused parts and their usage within new products. It also provides information and criteria about the assurance [for example, testing and analysis, required for products containing reused parts, which are declared "qualified-as-good-as-new" (QAGAN)] relative to the designed life of the product.

This document specifies requirements to be satisfied before making a declaration or applying a designation of QAGAN. This document also gives guidance to support any organisation that makes declarations about dependability of products containing reused parts.

In this document, the term "product" covers electrical, electro-mechanical, mechanical parts or hardware that can contain software.

"Qualified-as-good-as-new" (QAGAN) does not apply to reused materials or large structures and large systems, nor does it cover software products, concepts, and ideas.

The purpose of this document is to ensure by tests and analysis that the reliability and functionality of a new product containing reused parts is comparable to a product that contains only new parts. This would justify the manufacturer granting the next customer the full warranty of the product with "qualified-as-good-as-new" (QAGAN) parts.

NOTE This document can also be applied in producing product-specific standards by technical committees responsible for an application sector.

Annex A describes extending useful life by refurbishment, updating, upgrading, maintenance and used as second-hand. These concepts are defined and the requirements for using the term with reference to this document are stated.

2 Normative references

There are no normative references in this document.