SVENSK STANDARD

SS-EN IEC 60436+A11, utg 2:2025

Fastställd	Sida	Ansvarig kommitté
2025-11-19	1 (159)	SEK TK 59

Diskmaskiner för hushållsbruk – Funktionsprovning

Electric dishwashers for household use – Methods for measuring the performance

Som svensk standard gäller europastandarden EN IEC 60436:2025. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 60436:2025.

Nationellt förord

Europastandarden EN IEC 60436:2025

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 60436, Fifth edition, 2025 - Electric dishwashers for household use - Methods for measuring the performance**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 60436, utg 1:2020 med eventuella tillägg, ändringar och rättelser gäller ej fr o m 2027-09-30.

ICS 97.040.40

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 60436

September 2025

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Supersedes EN 60436:2020; EN 60436:2020/A11:2020;
EN 60436:2020/AC:2020-06; EN 60436:2020/A12:2022

English Version

Electric dishwashers for household use - Methods for measuring the performance (IEC 60436:2025)

Lave-vaisselle électriques à usage domestique - Méthodes de mesure de l'aptitude à la fonction (IEC 60436:2025)

Elektrische Geschirrspüler für den Hausgebrauch - Messverfahren für Gebrauchseigenschaften (IEC 60436:2025)

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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 60436:2025 E

SEK Svensk Elstandard SS-EN IEC 60436+A11, utg 2:2025

European foreword

The text of document 59A/273/FDIS, future edition of IEC 60436, prepared by SC 59A "Electric dishwashers" of IEC/TC 59 "Performance of household and similar electrical appliances" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60436:2025.

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)	2026-09-30
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2026-09-30

This document supersedes EN 60436:2020 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.

This document is read in conjunction with EN IEC 60436:2025/A11:2025.

This document has been prepared under a standardization request addressed to CENELEC by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

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 60436:2025 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 60704-3:2019 NOTE Approved as EN 60704-3:2019

IEC 60436

Edition 5.0 2025-06

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Electric dishwashers for household use - Methods for measuring the performance

Lave-vaisselle électriques à usage domestique - Méthodes de mesure de l'aptitude à la fonction

ICS 97.040.40

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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Electric dishwashers for household use - Methods for measuring the performance

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 60436 has been prepared by subcommittee 59A: Electric dishwashers, of IEC technical committee 59: Performance of household and similar electrical appliances. It is an International Standard.

This fifth edition cancels and replaces the fourth edition published in 2015, and Amendment 1:2020. This edition constitutes a technical revision.

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

a) Implementation of a new reference machine, which better reflects modern dishwasher energy and water saving technologies. Its ability to function as a reference machine for the cleaning assessment was assessed in a Round Robin Test.
b) Implementation of the new reference detergent type E, which better reflects market detergents formulations. It includes upgraded enzymes and a lower content of silicates to reduce the alkalinity which simplifies the world wide transportation by avoiding dangerous goods labelling and therefore improves the usage all over the world.
c) Implementation of an alignment factor for the cleaning performance assessment as proposed in a scientific study done by an university to align test results of the previous version to the new version of this document with the new reference system described above.
d) Introduction of replacements and alternatives for the pan and knives as the production of the current ones was stopped.
e) Improvement of the room temperature control by a temperature measurement inside the dishwasher directly prior to the start of the test programme.
f) Update of the weight of different load items and the specified ranges to anneal the requirements in the document to the actual weight of the items.
g) Introduction of an updated method to assess low power modes providing a step-by-step measurement description and including new modes, e.g. network standby which are of increased importance for dishwasher offering additional services via internet connection. Additionally, reactions to different interactions with the appliance can be assessed in a better way and learnings of Round Robin Test are included.
h) Inclusion of additional method for dishwasher testing which allows the assessment of variations of dishwasher units from one model.
i) New requirements for the loading and handling instructions for tests institutes.
j) Implementation of testing methodology for multi-compartment dishwashers.
k) Improvement of ballast soil preparation process in Annex V.

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

Draft	Report on voting
59A/273/FDIS	59A/276/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.

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

The committee has decided that the contents of the base publication and its amendment 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, or
– revised.

INTRODUCTION

The history of this fifth edition of IEC 60436 is provided as follows:

– Discussion began in fourth quarter of 2021 during one of the web conferences of Maintenance Team 2.

– A first working draft was developed and discussed during the Qingdao China meeting in September 2023.

– It was decided by SC 59A to proceed directly to CDV, skipping CD stage, due to urgency of implementation of the new detergent (3.1.23) E. This urgency is caused by production termination of enzymes used for detergent (3.1.23) D composition.

– Implementation of new reference system, the new reference detergent (3.1.23) and the new reference machine (3.1.6), is done based on data coming from Round Robin Test conducted in 2022-2023.

Further readings:

ISO/IEC Guide 98-3:2008/Suppl 2:2011 [1], *Uncertainty of measurement – Part 3: Guide to the expression of uncertainty in measurement (GUM:1995) – Supplement 2: Extension to any number of output quantities*

ISO/IEC Guide 98-4:2012 [2], *Uncertainty of measurement – Part 4: Role of measurement uncertainty in conformity assessment*

DIN 5035-6:2006 [3], *Beleuchtung mit künstlichem Licht – Teil 6: Messung und Bewertung* ("Lighting *with artificial light – Part 6: Measurements and evaluation*")

ISO 3310-1:2016 [4], *Test sieves – Technical requirements and testing – Part 1: Test sieves of metal wire cloth*

EN 12665:2011 [5], *Light and lighting – Basic terms and criteria for specifying lighting requirements*

IEC 60704-3:2019 [6], *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – Part 3: Procedure for determining and verifying declared noise emission values*

ISO/IEC Guide 98-1:2024 [7], *Guide to the expression of uncertainty in measurement — Part 1: Introduction*

ISO/IEC Guide 98-3:2008 [8], *Uncertainty of measurement – Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)*

ISO/IEC Guide 98-3:2008/Suppl 1:2008 [9], *Uncertainty of measurement – Part 3: Guide to the expression of uncertainty in measurement (GUM:1995) – Supplement 1: Propagation of distributions using a Monte Carlo method*

1 Scope

This document applies to electric dishwashers (3.1.1) for household and similar use that are supplied with hot and/or cold water.

The object of this document is to state and define the principal performance characteristics of electric dishwashers (3.1.1) for household and similar use and to describe the standard methods of measuring these characteristics.

This document is concerned neither with safety nor with minimum performance requirements.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

IEC 60704–2–3, *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – Part 2-3: Particular requirements for dishwashers*

IEC 60705, *Household microwave ovens – Methods for measuring performance*

IEC 60734:2012, *Household electrical appliances - Performance - Water for testing*

IEC 62301:2011, *Household electrical appliances - Measurement of standby power*

IEC 63474, *Electrical and electronic household and office equipment - Measurement of networked standby power consumption of edge equipment*

ISO 607, *Surface active agents and detergents – Methods of sample division*

ISO 80000-1:2022, *Quantities and units — Part 1: General*

DIN 51757, *Testing of mineral oils and related materials - Determination of density*

EN 1262, *Surface active agents - Determination of pH value of solutions or dispersions*