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# INTERNATIONAL STANDARD

# IEC 60436

Third edition  
2004-02

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## Electric dishwashers for household use – Methods for measuring the performance

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## CONTENTS

FOREWORD .....	4
1 Scope .....	7
2 Normative references .....	7
3 Terms and definitions .....	7
4 List of measurements .....	9
5 General conditions for measurements .....	9
5.1 General .....	9
5.2 Conditioning of the machine under test and sequence of test procedures .....	10
5.3 Electricity supply for machines .....	10
5.4 Test programme .....	11
5.5 Ambient conditions .....	11
5.6 Water supply .....	11
5.7 Detergent .....	12
5.8 Rinse agent .....	13
5.9 Salt .....	13
6 Cleaning performance .....	13
6.1 General and purpose .....	13
6.2 Load .....	13
6.3 Soiling agents .....	14
6.4 Preparation and application of soiling agents .....	14
6.5 Drying of the soiled dishes .....	21
6.6 Loading and operating .....	22
6.7 Evaluation .....	22
6.8 Expressing results .....	27
7 Drying performance .....	27
7.1 General and purpose .....	27
7.2 Load .....	27
7.3 Loading and operating .....	27
7.4 Evaluation .....	28
7.5 Expressing results .....	31
8 Energy consumption, water consumption and time .....	31
8.1 General and purpose .....	31
8.2 Method of measurement .....	31
9 Airborne acoustical noise .....	33
Annex A (normative) Place settings and serving pieces (non-AHAM style load) .....	34
Annex B (normative) AHAM style load .....	36
Annex C (informative) Illustration of soil distribution .....	39
Annex D (normative) Test materials for laboratories .....	40
Annex E (normative) Description of the reference machine .....	42
Annex F (informative) Addresses of suppliers .....	46
Annex G (normative) Microwave oven and through-circulation thermal cabinet .....	50

Annex H (informative) Guidelines for assessing cleaning performance.....	51
Annex I (normative) Test enclosure for built-in dishwasher.....	53
Annex J (informative) Flow chart – test sequence for IEC 60436.....	54
Annex K (normative) Shade chart.....	55
Annex L (informative) Test report format.....	56
Annex M (informative) Adjusting water consumption in the reference dishwasher.....	59
Bibliography.....	60
Figure 1 – Position of the glasses on the microwave turntable .....	16
Figure I.1 – Test enclosure for built-in dishwasher .....	53
Table 1 – Evaluation of Cleaning Tests .....	23
Table 2 – Evaluation to determine the cleaning index.....	24
Table 3 – Numerical Values of the <i>t</i> -factor for statistical calculations .....	26
Table 4 – Evaluation to determine the drying index .....	29

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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### **ELECTRIC DISHWASHERS FOR HOUSEHOLD USE – METHODS FOR MEASURING THE PERFORMANCE**

#### FOREWORD

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

This third edition cancels and replaces the second edition published in 1981 and constitutes a technical revision. Major changes introduced in the second edition include

- changes made to the soils used in the standard;
- the use of an oven and microwave oven to dry the soils;
- the alternate 15 to 18 hour air dry method to dry the soils;
- the addition of a reference dishwasher;
- the recognition of alternate supply voltages and frequencies;
- the recognition of a cold or hot water supply to the dishwasher;
- the detergent and rinse aid compositions have been updated to reflect current technology;
- the addition of the Aham load;
- the evaluation of the filter systems;

- the modification of the scoring system from 2 to 5 grades;
- the definition of program and cycle time;
- the temperature correction for energy testing;
- harmonization of ambient conditions.

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

FDIS	Report on voting
59A/114A/FDIS	59A/116/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.

The committee has decided that the contents of this publication will remain unchanged until 2006. At this date, the publication will be either:

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

## INTRODUCTION

In 1996, IEC subcommittee 59A charged its Working Group 2 with the revision of the second edition of IEC 60436 to make it suitable for the international needs and to make it suitable for the current levels of dishwasher performance and technology.

The second edition was published in 1981 and has not been significantly updated.

SC59A instructed the WG2 to take the Cenelec draft standard EN 50242 as the basis for the third edition.

An important reason for the third edition was the need to take into account the needs of all countries such as varying voltages and frequencies, different water supply temperatures and water hardness and availability of specified soils in the various countries.

To meet the goal the following significant technical changes were made.

- The repeatability and reproducibility of the test results have been improved by the introduction of the same model reference dishwasher specified for all locations.
- The soils have been changed to reflect the modern dishwasher's capability.
- The preparation of the soils has been improved to enhance repeatability and reproducibility by the introduction of new drying methods.
- The standard also recognizes various supply voltages and frequencies, cold or hot water supply, an alternate Aham load, the evaluation of dishwasher filter systems.
- The standard has updated the formulation of the detergent and rinse agents to reflect the products on the market today.
- The standard has increased the sensitivity of the grading scale from two to five points to improve repeatability and reproducibility.
- Ambient conditions have been brought closer to harmonization.
- More detailed instructions have been provided for the installation of the various designs of dishwashers.
- Correction formulae have been provided for the correction of energy consumption measurements for varying water supply temperature.

## **ELECTRIC DISHWASHERS FOR HOUSEHOLD USE – METHODS FOR MEASURING THE PERFORMANCE**

### **1 Scope**

This international standard applies to electric dishwashers for household use that are supplied with hot and/or cold water.

The object is to state and define the principal performance characteristics of electric dishwashers for household use and to describe the standard methods of measuring these characteristics.

This standard is concerned neither with safety nor with performance requirements.

### **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.

IEC 60350, *Electric cooking ranges, hobs, ovens and grills for household use – Methods for measuring performance*

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 60704-3, *Test code for the determination of airborne acoustical noise emitted by household and similar electrical appliances – Part 3: Procedure for determining and verifying declared noise emission values*

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

IEC 60734, *Household electrical appliances – Performance – Hard water for testing*

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

AHAM DW-1:2003: *Performance testing methods for household electric dishwashers*