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**Household electric cooking appliances –
Part 1: Ranges, ovens, steam ovens and grills – Methods for measuring
performance**

**Appareils de cuisson électrodomestiques –
Partie 1: Cuisinières, fours, fours à vapeur et grils – Méthodes de mesure de
l'aptitude à la fonction**



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VERSION REDLINE



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

IEC 60350-1
Edition 2.0 2016-04

HOUSEHOLD ELECTRIC COOKING APPLIANCES –

**Part 1: Ranges, ovens, steam ovens and grills –
Methods for measuring performance**

INTERPRETATION SHEET 1

This interpretation sheet has been prepared by subcommittee 59K: Performance of household and similar electrical cooking appliances, of IEC technical committee 59: Performance of household and similar electrical appliances.

The text of this interpretation sheet is based on the following documents:

DISH	Report on voting
59K/322/DISH	59K/325/RVDISH

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

SC 59K interpretation sheet on: Volume measurement in IEC 60350-1:2016

Rationale

When measuring the oven volume in accordance with IEC 60350-1:2016, 6.2, the wording in the standard leaves room for interpretation as to how to proceed with side grids in the oven. In many regions, the volume is used to calculate an energy efficiency index, which always raises the question as to what extent the measurement with and without side grids leads to different statements on energy efficiency.

This document clarifies how to interpret 6.2 of IEC 60350-1:2016 in order to achieve a clearer approach.

Question

According to IEC 60350-1:2016, 6.2, removable items, e.g. the side grids, shall be removed to measure the volume if this is indicated in the user manual. The question that arises is to ascertain when this condition is met, and when the measurement is performed without side grids.

Answer

The usable width of the oven is measured in accordance with 6.2.3 from the left side wall of the cavity to the right side wall of the cavity. In accordance with 6.2.1, parts, such as side grids, shall be removed before the measurement if they are removable and if they are not necessary for any intended operation, in accordance with the user manual.

As a result, side grids shall be removed if:

- 1) the user manual describes the removal of side grids (the extent of the description and the assignment to a chapter is not defined);
- 2) the user manual describes any application for which the removable parts are not required (= intended operation). This is the case when an application on the bottom of the cavity without the use of side grids is given as an example. The number of applications as well as the type of application (heating type, temperature, minor relevance, preheated operation) are not specified in 6.2.1 and are, therefore, irrelevant.

CONTENTS

FOREWORD.....	6
1 Scope.....	9
2 Normative references	10
3 Terms and definitions	10
4 List of measurements	12
4.1 Dimensions and mass.....	12
4.2 Oven and combi steam oven.....	12
4.3 Steam oven and combi steam oven.....	12
4.4 Grill.....	12
4.5 Warming compartments	13
4.6 Cleaning	13
5 General conditions for the measurement.....	13
5.1 Test room	13
5.2 Electricity supply.....	13
5.3 Instrumentation.....	14
5.4 Positioning the appliance	14
5.5 Preheating	15
5.6 Setting of controls.....	15
5.7 Rounding	15
6 Dimensions and mass.....	15
6.1 Overall dimensions.....	15
6.2 Usable internal dimensions and calculated volume	17
6.2.1 General.....	17
6.2.2 Usable height	19
6.2.3 Usable width.....	19
6.2.4 Usable depth.....	19
6.2.5 Calculated volume.....	19
6.3 Overall internal dimensions and overall volume.....	19
6.3.1 General	19
6.3.2 Overall height (<i>H</i>)	20
6.3.3 Overall width (<i>W</i>)	20
6.3.4 Overall depth (<i>D</i>).....	20
6.3.5 Overall volume of rectangular cavities	20
6.3.6 Overall volume of non-rectangular cavities	20
6.4 Dimensions of shelves and steaming accessories.....	20
6.5 Dimensions of grill grids.....	20
6.5.1 Entire area.....	20
6.5.2 Usable area.....	21
6.6 Dimensions of warming compartments	21
6.7 Level of shelf	21
6.8 Mass of the appliance	22
7 Ovens and combi steam ovens	22
7.1 General.....	22
7.2 Preheating the empty oven	23
7.3 Accuracy of the control	23
7.4 Energy consumption and time for heating a load.....	24

7.4.1	Purpose	24
7.4.2	Test load	24
7.4.3	Measurement	26
7.4.4	Evaluation and calculation	29
7.4.5	Reporting of test results	30
7.5	Heat distribution	30
7.5.1	General	30
7.5.2	Shortbread	30
7.5.3	Small cakes	33
7.6	Ability to supply heat	39
7.6.1	Fatless sponge cake	39
7.6.2	Apple pie	40
8	Steam ovens and combi steam ovens	41
8.1	Ability to supply steam	41
8.1.1	Purpose	41
8.1.2	Ingredients and steaming accessory	41
8.1.3	Procedure	42
8.1.4	Assessment	43
8.2	Distribution of steam	44
8.2.1	Purpose	44
8.2.2	Ingredients, steaming accessories and number of levels	44
8.2.3	Procedure	44
8.2.4	Assessment	45
8.3	Determination of the capacity	47
8.3.1	Purpose	47
8.3.2	Ingredients	47
8.3.3	Mass of peas, steaming accessories and number of levels	47
8.3.4	Procedure	48
8.3.5	Assessment	49
8.4	Accuracy of the temperature control	50
9	Grills Effective grilling area	51
9.1	Purpose	51
9.2	Grilling area	51
9.2.1	Purpose	51
9.2.2	Procedure	51
9.2.3	Assessment	51
9.3	Grilling	51
9.3.1	Purpose	51
9.3.2	Ingredients	51
9.3.3	Procedure	51
9.3.4	Assessment	51
9.1	Purpose	52
9.2	Ingredients	53
9.3	Preparation	53
9.4	Procedure	53
9.5	Assessment	53
9.5.1	General	53
9.5.2	Criteria of validity	54
9.5.3	Criteria of assessment	54

10	Warming compartments	55
11	Cleaning	55
11.1	Pyrolytic self-cleaning ovens	55
11.2	Ovens with catalytic cleaning	56
12	Consumption measurement of low power modes	56
	Annex A (normative) Colour measuring instrument	58
	Annex B (normative) Brown shade charts	60
	Annex C (informative) Addresses of suppliers	62
	C.1 General	62
	C.2 Testing ingredients for small cakes	62
	C.3 Food mixer	64
	C.4 Lamp for digital measurement systems	64
	C.5 Digital measurement system	65
	C.6 Colour measuring instrument	65
	C.7 Brick for testing energy consumption of ovens	65
	C.8 Steaming basket	66
	Annex D (normative) Description of the test brick	67
	D.1 Specification	67
	D.2 Supplier and order specification	67
	Annex E (informative) Data and calculation sheet: Energy consumption for heating a load (7.4)	69
	Annex F (normative) Green shade charts	71
	Annex G (informative) Measurement of the energy consumption of the cooling down period	73
	G.1 Purpose	73
	G.2 Preliminary measurements	73
	G.3 Measuring the energy consumption of the cooling down period	74
	Annex H (informative) Check of applied microwave energy during the measurement according to 7.4	75
	H.1 General	75
	H.2 Procedure	75
	Annex I (informative) Marking the temperature setting for checking the oven temperature	76
	Bibliography	77
	Figure 1 – Position of the thermocouple for measuring ambient temperature	13
	Figure 2 – Dimensions of appliances	16
	Figure 3 – Dimensions of built-in appliances	17
	Figure 4 – Usable internal dimensions	18
	Figure 5 – Gauge for measuring these dimensions	18
	Figure 6 – Device for checking the level of shelves	22
	Figure 7 – Example of a thermocouple for the test of 7.4	25
	Figure 8 – Shape of the nozzle for extruding pastry	31
	Figure 9 – Position of pastry strips on the baking sheet	32
	Figure 10 – Convex colour sample	37
	Figure 11 – Template for the sectioning of small cakes	37

Figure 12 – Reference values of cooking time (t_{ref})	50
Figure 13 – Examples for determining the entire area and usable area of a grill grid	21
Figure 14 – Determining the assessable area of a slice of toast – Example	54
Figure A.1 – Colour measuring instrument	59
Figure D.1 – Position of the thermocouples	68
Figure G.1 – Phases of energy consumption measurement – Example	73
Figure H.1 – Filament lamp	75
Figure I.1 – Polar coordinate paper – Example	76
Table 1 – settings	27
Table 2 – Ingredients	33
Table B.1 – Classification of shade numbers	60
Table B.2 – Examples for the shade charts	60
Table C.1 – Ingredient specification	62
Table C.2 – Food mixer – revolutions per minute	64
Table C.3 – Mixing time and setting	64
Table F.1 – Specification of relevant green shade charts	71

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HOUSEHOLD ELECTRIC COOKING APPLIANCES –**Part 1: Ranges, ovens, steam ovens and grills –
Methods for measuring performance**

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IEC 60350-1 edition 2.1 contains the second edition (2016-04) [documents 59K/273/FDIS and 59K/277/RVD], its interpretation sheet 1 (2021-03) and its amendment 1 (2021-05) [documents 59K/328/FDIS and 59K/331/RVD].

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.

International Standard IEC 60350-1 has been prepared by subcommittee 59K: Performance of household and similar electrical cooking appliances, of IEC technical committee 59: Performance of household and similar electrical appliances.

This second edition constitutes a technical revision.

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

- new definitions for "**set to off mode**" and "**set to standby mode**" are included in Clause 3;
- reference to ISO 80000 regarding rounding;
- more exact determination of the mass of the appliances (6.2);
- update of the existing 7.3 in order to improve the clarity of procedure;
- additional temperature requirement in 7.4.3 to ensure an adequate temperature setting during the energy measurement process;
- editorial changes in 7.6.1.3, 7.6.2.1, 7.6.2.2 and 7.6.2.3;
- revision of Clause 8 in order to increase the repeatability for the measurements for steam ovens;
- Clause 12 "Standby power" is renamed to "Consumption measurement of low power modes" and the content is adapted for IEC 62301:2011;
- replacing the supplier for the colouring measurement device in Clause C.6, because the previous device is no longer available;
- adaptation of Annex A to the new supplier of colouring measurement devices;
- adaptation of Annex E;
- measurement method for measuring the consumption of the **cooling down period** is added in the informative, new Annex G;
- measurement method to check applied microwave energy during the measurement according to 7.4 is added in the informative Annex H;
- new Annex I for marking the temperature setting for checking the oven temperature.

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HOUSEHOLD ELECTRIC COOKING APPLIANCES –

Part 1: Ranges, ovens, steam ovens and grills – Methods for measuring performance

1 Scope

This part of IEC 60350 specifies methods for measuring the performance of electric **cooking ranges, ovens, steam ovens, and grills** for household use.

NOTE 3 This document is also applicable to portable appliances with similar functionalities that were previously covered by the withdrawn IEC 61817.

The **ovens** covered by this standard may be with or without microwave function.

Manufacturers should define the primary cooking function of the appliance – microwave function or thermal heat. The primary cooking function should be measured with an existing method according to energy consumption. If the primary cooking function is declared in the instruction manual as a microwave function, IEC 60705 is applied for energy consumption measurement. If the primary cooking function is declared as a thermal heat, then IEC 60350-1 is applied for energy consumption measurement.

If the primary function is not declared by the manufacturer, the performance of the microwave function and thermal heat should be measured as far as it is possible.

NOTE 1 For measurement of energy consumption and time for heating a load (see 7.4), this standard is furthermore not applicable to:

- microwave combination function;
- ovens with reciprocating trays or turntable;
- small cavity ovens;
- ovens without adjustable temperature control;
- heating functions other than defined in 3.12 to 3.14;
- appliances with only solo **steam function** (3.15).

NOTE 2 This standard does not apply to

- microwave ovens (IEC 60705),
- ~~portable appliances for cooking, grilling, steaming and similar functions (IEC 61817).~~

This standard defines the main performance characteristics of these appliances which are of interest to the user and specifies methods for measuring these characteristics.

This standard does not specify a classification or ranking for performance.

NOTE 3 Some of the tests which are specified in this standard are not considered to be reproducible since the results may vary between laboratories. They are therefore intended for comparative testing purposes only.

NOTE 4 This standard does not deal with safety requirements (IEC 60335-2-6 and IEC 60335-2-9).

NOTE 5 Appliances covered by this standard may be built-in or for placing on a working surface or the floor.

NOTE 6 There is no measurement method for the energy consumption for grilling and **steam functions** available.