

# **SLOVENSKI STANDARD**

## **SIST EN 60350-2:2018**

**01-marec-2018**

**Nadomešča:**

**SIST EN 60350-2:2013**

**SIST EN 60350-2:2013/A11:2014**

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**Gospodinjski električni kuhalni aparati - 2. del: Kuhalne plošče - Metode za merjenje funkcionalnosti**

Household electric cooking appliances - Part 2: Hobs - Methods for measuring performance

Elektrische Kochgeräte für den Hausgebrauch - Teil 2: Kochfelder - Verfahren zur Messung der Gebrauchseigenschaften

Procédures d'essai de base des sous-systèmes de télécommunication à fibres optiques - Partie 1-1: Procédures d'essai des sous-systèmes généraux de télécommunication - Mesure de la puissance optique des émetteurs couplés à des câbles à fibres optiques un

**Ta slovenski standard je istoveten z: EN 60350-2:2018**

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**ICS:**

97.040.20

Štedilniki, delovni pulti,  
pečice in podobni aparati

Cooking ranges, working  
tables, ovens and similar  
appliances

**SIST EN 60350-2:2018**

**en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 60350-2**

January 2018

ICS 97.040.20

Supersedes EN 60350-2:2013

English Version

Household electric cooking appliances -  
Part 2: Hobs - Methods for measuring performance  
(IEC 60350-2:2017 , modified)

Appareils de cuisson électrodomestiques -  
Partie 2: Tables de cuisson - Méthodes de mesure de  
l'aptitude à la fonction  
(IEC 60350-2:2017 , modifiée)

Elektrische Kochgeräte für den Hausgebrauch -  
Teil 2: Kochfelder - Verfahren zur Messung der  
Gebrauchseigenschaften  
(IEC 60350-2:2017 , modifiziert)

This European Standard was approved by CENELEC on 2017-05-15. 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.

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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, Serbia, 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: Rue de la Science 23, B-1040 Brussels**

**EN 60350-2:2018****European foreword**

The text of document 59K/293/FDIS, future edition 2 of IEC 60350-2, prepared by SC 59K "Performance of household and similar electrical cooking appliances" 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 60350-2:2018.

A draft amendment, which covers common modifications to IEC 60350-2 (59K/287/CDV), was prepared by CLC/TC 59X "Performance of household and similar electrical appliances" and approved by CENELEC.

The following dates are fixed:

latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2018-07-19
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latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2021-01-19
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This document supersedes EN 60350-2:2013.

An Excel 97-2003 data calculation program is available with this document for the automatic calculation of the energy consumption.

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.

Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 60350-2:2017 are prefixed "Z".

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Regulations.

For the relationship with EU Regulations see informative Annex ZZA and Annex ZZB which are integral parts of this document.

**Endorsement notice**

The text of the International Standard IEC 60350-2:2017 was approved by CENELEC as a European Standard with agreed common modifications.

**Common modifications****5.2 Electricity supply**

*Replace the last paragraph of Subclause 5.2 by:*

The supply frequency shall be at a nominal 50 Hz with a relative tolerance of  $\pm 1\%$ .

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## 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](http://www.cenelec.eu)

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60584-2	1982	Thermocouples - Part 2: Tolerances	EN 60584-2	1993
IEC 62301	-	Electrical and electronic household and office equipment - Measurement of low power consumption	EN 50564	-
ISO 80000-1	2009	Quantities and units - Part 1: General	EN ISO 80000-1	2013
CIE 15.2		Colorimetry	-	-

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## Annex ZB (informative)

### Uncertainty of measurements

Following IEC/TR 61923 “Household electrical appliances – Method of measuring performance – Assessment of repeatability and reproducibility”, the following expanded uncertainties for measurements according to this European Standard may be assumed.

In 2011, a round robin test was performed with 12 laboratories participating from all over Europe. One of the objectives was to check the robustness and precision of the measurement of energy consumption. Three technologies were tested: “solid plate”, “radiant heater”, “induction”, along with three technologies for the control system: “switch”, “energy regulator”, and “electronic control”. The size of the hobs is the most common one on the market: 60 cm with 4 cooking zones. To cover a reasonable amount of labor only one cooking zone with a diameter of 180 mm were considered. Results were analyzed by CLC/TC 59X/WG 10 together with CECED, and expanded uncertainties were calculated as shown in Table ZB.1.

**Table ZB.1 – Relative expanded uncertainty <sup>a</sup> of measured values of this European Standard  
Measured parameter**

Relative expanded uncertainty <sup>a</sup> of measured values of this European Standard Measured parameter	Relative expanded uncertainty of measured value <sup>b</sup> (k = 2)
energy consumption per cooking zone calculated per kg	2,75 %
Energy consumption per cooking area calculated per kg	<sup>c</sup>
Energy consumption per hob calculated per kg	<sup>c</sup>
<sup>a</sup> The expanded uncertainty only describes the uncertainty of the measuring method while the variance of the product is not included. <sup>b</sup> These values are the average of measurement figures taken from different technology, see above. <sup>c</sup> Not measured in this ring test.	

## Annex ZZA (informative)

### Relationship between this European Standard and the ecodesign requirements of Commission Regulation (EU) No 66/2014 aimed to be covered

This European Standard has been prepared under a Commission's standardization request M/495 Standardization mandate to CEN, CENELEC and ETSI under Directive 2009/125/EC relating to harmonized standards in the field of Ecodesign to provide one voluntary means of conforming to the ecodesign requirements of Commission Regulation (EU) No 66/2014 of 14 January 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for household **hobs** and range hoods [OJ L 29/33, 31.01.2014].

Once this standard is cited in the Official Journal of the European Union under that Regulation, compliance with the normative clauses of this standard given in Table ZZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding ecodesign requirements of that Regulation and associated EFTA Regulations.

**Table ZZA.1 — Correspondence between this European Standard and Commission Regulation (EU) No 66/2014 of 14 January 2014 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for household hobs [OJ L 29/33, 31.01.2014] and Commission's standardization request M/495 Standardization mandate to CEN, CENELEC and ETSI under Directive 2009/125/EC relating to harmonized standards in the field of Ecodesign**

Ecodesign requirements of Regulation No 66/2014 [OJ L 29/33, 31.01.2014]	Clause(s) / sub-clause(s) of this EN	Remarks / Notes
General description of the appliance model; number of cooking zones and/or areas; the heating technology.	1 Scope 2 Normative references 3 Terms and definitions	
Determining the size of cooking zones and cooking areas.	6.3 Cooking zones and cooking areas	
Measuring the energy consumption of a cooking zone or a cooking area of a domestic hob for one standardized cooking cycle.	5 General conditions for the measurement 7.1 General 7.2 Purpose 7.3 Determine a cookware set to assess a hob with cooking zones 7.4 Positioning the cookware on a cooking zone 7.5 Procedure for measuring the energy consumption of a cooking process Annex A.1 (normative) General Annex A.2 Hob with cooking area Annex A.3 Positioning on a cooking area Annex B (informative) Aids for measuring the energy consumption according to clause 7 Annex C (informative) Examples how to select and position the	Excluding 5.6.2 as this alternative cookware leads only to comparative testing results.



	cookware for 86 measurements according to clause 7 and Annex A F.3 Stainless steel for bottom material of the standardized cookware F.4 Cookware for measuring the energy consumption and heating up time	
Evaluation of the result on energy consumption and determining the normalized energy consumption in Wh / 1000 g water.	7.5.4 Evaluation and calculation	
Calculation sheet	Annex E (informative) Data and Calculation Sheet: Energy consumption of a cooking process (see clause 7 and Annex A)	

**WARNING 1** — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

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**WARNING 2** — Other Union legislation may be applicable to the products falling within the scope of this standard.

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## Annex ZZB (informative)

### Relationship between this European Standard and the ecodesign requirements of Commission Regulation (EC) No 1275/2008 aimed to be covered

This European Standard has been prepared under a Commission's standardization request M/439 Mandate to CEN, CENELEC and ETSI for standardization in the field of standby and off modes power consumption measurement for energy using products (EuPs) to provide one voluntary means of conforming to the ecodesign requirements of Commission Regulation (EC) No 1275/2008 of 17 December 2008 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for standby and off mode electric power consumption of electrical and electronic household and office equipment [OJ L 339, 18.12.2008].

Once this standard is cited in the Official Journal of the European Union under that Regulation, compliance with the normative clauses of this standard given in Table ZZC.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding ecodesign requirements of that Regulation and associated EFTA regulations.

**Table ZZB.1 – Correspondence between this European Standard and Commission Regulation (EC) No 1275/2008 of 17 December 2008 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for standby and off mode electric power consumption of electrical and electronic household and office equipment [OJ L 339, 18.12.2008] and Commission's standardization request M/439 Mandate to CEN, CENELEC and ETSI for standardization in the field of standby and off modes power consumption measurement for energy using products (EuPs)**

Ecodesign requirements of Regulation (EC) No 1275/2008 [OJ L 339, 18.12.2008]	Clause(s) and subclause(s) of this EN	Remarks / Notes
Power consumption requirements for standby- and off-mode	12 Power measurement of low power modes	

**WARNING 1** — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

**WARNING 2** — Other Union legislation may be applicable to the products falling within the scope of this standard.



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Edition 2.0 2017-08

# INTERNATIONAL STANDARD



**Household electric cooking appliances –  
Part 2: Hobs – Methods for measuring performance**

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## CONTENTS

FOREWORD.....	6
1 Scope .....	8
2 Normative references .....	8
3 Terms and definitions .....	8
4 List of measurements .....	11
4.1 Dimensions and mass .....	11
4.2 Cooking zones and cooking areas.....	11
4.3 Cleaning .....	12
5 General conditions for the measurements.....	12
5.1 Test room .....	12
5.2 Electricity supply.....	12
5.3 Instrumentation and measurements .....	12
5.4 Positioning the appliance .....	13
5.5 Initial conditions.....	14
5.6 Cookware .....	14
5.6.1 Standardized cookware .....	14
5.6.2 Alternative cookware .....	18
6 Dimensions and mass.....	19
6.1 Overall dimensions .....	19
6.2 Mass of the appliance .....	21
6.3 Cooking zones and cooking areas.....	21
6.3.1 Number of cooking zones per hob.....	21
6.3.2 Dimensions of cooking zones .....	21
6.3.3 Dimensions of cooking areas .....	22
6.4 Level of solid hotplates .....	22
6.5 Distance between cooking zones .....	23
7 Energy consumption and heating up time .....	23
7.1 General.....	23
7.2 Purpose .....	23
7.3 Determine a cookware set to assess a hob with cooking zones.....	23
7.4 Positioning the cookware on a cooking zone .....	24
7.5 Procedure for measuring the energy consumption of a cooking process.....	25
7.5.1 Preparation.....	25
7.5.2 Preliminary measurements .....	25
7.5.3 Measuring the energy consumption .....	27
7.5.4 Evaluation and calculation .....	28
7.6 Procedure for measuring the heating up time .....	29
8 Ability to control the temperature of a load.....	29
8.1 Lower control position .....	29
8.1.1 Purpose .....	29
8.1.2 Cookware, positioning and ingredients.....	30
8.1.3 Procedure.....	30
8.1.4 Assessment.....	31
8.2 Temperature overshoot of hotplates .....	31
8.2.1 Purpose .....	31
8.2.2 Ingredients and cookware .....	31

8.2.3	Procedure.....	31
8.2.4	Assessment.....	31
9	Heat distribution and heat supply.....	32
9.1	Measuring the heat distribution .....	32
9.1.1	Test purpose .....	32
9.1.2	Discs .....	32
9.1.3	Pre-test for determining the setting .....	33
9.1.4	Preparation of the disc for the main test .....	34
9.1.5	Main test .....	35
9.1.6	Assessment.....	35
9.2	Measuring the continuous frying.....	39
9.2.1	Purpose .....	39
9.2.2	Specification of the frying pan.....	40
9.2.3	Recipe for pancakes .....	40
9.2.4	Procedure.....	41
9.2.5	Assessment.....	41
10	Heat performance of cooking zones.....	41
10.1	Purpose .....	41
10.2	Procedure .....	41
11	Smallest detected diameter for induction cooking zones.....	43
11.1	Purpose .....	43
11.2	Procedure .....	43
12	Power measurement of low power modes .....	44
13	Spillage capacity of hobs.....	44
Annex A (normative)	Further requirements for measuring the energy consumption and heating up time for cooking areas.....	46
A.1	General.....	46
A.2	Hob with cooking area .....	46
A.2.1	General .....	46
A.2.2	Cooking area without limitative marking .....	46
A.2.3	Hob with cooking area with limitative marking .....	47
A.2.4	Hob with cooking zones and cooking areas.....	48
A.3	Positioning on a cooking area .....	48
A.3.1	General .....	48
A.3.2	Positioning on a cooking area without limitative markings .....	48
A.3.3	Positioning on a cooking area with limitative markings .....	49
Annex B (informative)	Aids for measuring the energy consumption according to Clause 7 ...	53
B.1	Fixing the temperature measurement instrument to the lid – Example .....	53
B.2	Marking the lowest possible simmering power setting .....	53
Annex C (informative)	Examples how to select and position the cookware for measurements according to Clause 7 and Annex A.....	55
C.1	Example 1 – Cooking zones.....	55
C.2	Example 2 – cooking zones combined with cooking area with limitative markings .....	56
C.3	Example 3 – cooking area with limitative markings > 3 controls with the area of control in front.....	59
C.4	Example 4 – cooking area with limitative markings > 3 controls with the area of control at the side .....	62
Annex D (normative)	Shade chart .....	65

Annex E (informative) Data and calculation sheet: energy consumption of a cooking process (see Clause 7 and Annex A) .....	67
Annex F (informative) Addresses of suppliers .....	68
F.1 General.....	68
F.2 Disc material (C45) for measuring the smallest detected diameter .....	68
F.3 Stainless steel for bottom material of the standardized cookware .....	68
F.4 Cookware for measuring the energy consumption and heating up time.....	68
F.5 Disc for measuring the heat distribution .....	68
F.6 Lamp for digital measurement systems .....	68
F.7 Digital measurement system .....	69
F.8 Testcharts for checking the resolution of the imaging system .....	69
Annex G (informative) Example for assessing the lower control position .....	70
G.1 General.....	70
G.2 Criteria.....	70
Bibliography.....	71
Figure 1 – Standardized cookware .....	18
Figure 2 – Dimensions of appliances.....	20
Figure 3 – Dimensions of built-in hobs .....	21
Figure 4 – Device for checking the level of solid hotplates.....	22
Figure 5 – Overshoot measurement .....	25
Figure 6 – Energy consumption measurement process for a cooking process .....	27
Figure 7 – Diametral lines .....	39
Figure 8 – Disc to determine the smallest detected diameter .....	44
Figure A.1 – Layout for a hob with cooking area without limitative marking – Example .....	46
Figure A.2 – Layouts for a hob with a cooking area with limitative marking – Examples .....	47
Figure A.3 – Drawing layer.....	49
Figure A.4 – Position a cookware set on a cooking area with limitative markings ≤ 3 controls – Example .....	50
Figure A.5 – Position a cookware set on a cooking area with limitative markings > 3 controls – Example .....	52
Figure B.1 – Position of the temperature measurement instrument.....	53
Figure B.2 – Polar coordinate paper – Example .....	54
Figure C.1 – Example 1: tubular hotplates, solid hotplates, radiant cooking zone or induction cooking zone .....	55
Figure C.2 – Example 1: selecting and positioning of cookware .....	56
Figure C.3 – Example 2: induction or radiant cooking zones combined with a cooking area with limitative markings .....	57
Figure C.4 – Example 2: selecting and positioning of cookware .....	58
Figure C.5 – Example 3: Cooking area with limitative markings > 3 controls with the area of the control in front.....	59
Figure C.6 – Example 3: procedure how to shift the cookware into the correct position – Step 1 .....	60
Figure C.7 – Example 3: Procedure how to shift the cookware into the correct position – Step 2 .....	61
Figure C.8 – Example 4: Cooking area with limitative markings > 3 controls with the area of the control at the side .....	62

Figure C.9 – Example 4: procedure how to shift the cookware into the correct position – Step 1 .....	63
Figure C.10 – Example 4: procedure how to shift the cookware into the correct position – Step 2 .....	64
Table 1 – Instruments .....	13
Table 2 – Measurements .....	13
Table 3 – Sizes of standardized cookware and water amounts .....	15
Table 4 – Criteria for selecting the cookware set regarding cooking zones .....	24
Table 5 – Amount of oil .....	30
Table 6 – Specifications for discs used for measuring the heat distribution .....	33
Table 7 – maximum time $t_{\max}$ for each size of disc .....	37
Table 8 – Ingredients and cooking durations .....	40
Table 9 – Quantities for heat performance test .....	42
Table 10 – Frying times for potato chips .....	42
Table A.1 – Criteria for the cookware set for measuring cooking areas without limitative marking .....	47
Table A.2 – Criteria for the cookware set for measuring cooking areas with limitative marking .....	48
Table D.1 – Classification of shade numbers regarding $R_y$ .....	65
Table D.2 – Examples for the shade charts regarding $L^*$ , $R_y$ and the specification of the limiting samples $H_{\text{limit}}$ and $H_{\text{lower}}$ .....	66

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