| STN | Elektrické varné spotrebiče pre domácnosť. Časť<br>2: Varné panely. Metódy merania funkčných<br>vlastností. | STN<br>EN 60350-2 |
|-----|-------------------------------------------------------------------------------------------------------------|-------------------|
|     |                                                                                                             | 36 1056           |

Táto norma obsahuje anglickú verziu európskej normy. This standard includes the English version of the European Standard.

Obsahuje: EN 60350-2:2013, IEC 60350-2:2011

Spolu s STN EN 60350-1 od 3.6.2016 ruší STN EN 50304 (36 1056) z novembra 2009

#### 118698

## **EUROPEAN STANDARD**

## EN 60350-2

NORME EUROPÉENNE EUROPÄISCHE NORM

July 2013

ICS 97.040.20

Supersedes EN 50304:2009 (partially) + A1:2010 (partially)

English version

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

(IEC 60350-2:2011, modified)

Appareils de cuisson électrodomestiques -Partie 2: Tables de cuisson -Méthodes de mesure de l'aptitude à la fonction (CEI 60350-2:2011, modifiée) Elektrische Kochgeräte für den Hausgebrauch -Teil 2: Kochmulden -Verfahren zur Messung der Gebrauchseigenschaften (IEC 60350-2:2011, modifiziert)

This European Standard was approved by CENELEC on 2013-06-03. 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.

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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

# **CENELEC**

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

#### **Foreword**

This document (EN 60350-2:2013) consists of the text of IEC 60350-2:2011 prepared by IEC/SC 59K "Ovens and microwave ovens, cooking ranges and similar appliances", of IEC/TC 59 "Performance of household and similar electrical appliances", together with the common modifications prepared by CLC/TC 59X "Performance of household and similar electrical appliances".

The following dates are fixed:

- latest date by which this document has to be implemented (dop) 2014-06-03 at national level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with this document have to be withdrawn
  (dow) 2016-06-03

Together with EN 60350-1:2013, this document will supersede EN 50304:2009/EN 60350:2009 + A1:2010/A11:2010.

EN 60350-2:2013 includes the following significant technical changes with respect to EN 50304:2009/EN 60350:2009:

- 1) a method to measure energy consumption of hobs
  - a) that is representative for a real cooking process, for which after the heat up phase a simmering phase has been implemented in the measurement. Water as a standardised load is used. Food is theoretically considered in the experimental setup but not used as that leads to insufficient reproducibility. The ranking between the technologies will not be changed by different methods/applications, so the energy consumption is measured only by one energy optimised method.
  - b) that is applicable to compare different electrically heated technologies like e.g. induction, radiant or solid plates
  - c) that leads not to a comparison with gas burners. Gas hobs are covered by EN 30-2-1.
  - d) that fulfil requirements of repeatability and reproducibility (crucial for energy measuring purposes). Therefore the cooking process is defined on the temperature level 90 °C to avoid influence on the boiling point by ambient pressure.
  - e) that is applicable for hobs with different layouts and **cooking zone** / area sizes.

This method is based on the method described in TC59X/217/DC.

- 2) definition of cooking areas:
  - Following new market trends a definition for cooking areas is given. A definition is necessary as cooking areas have other demands e.g. for positioning the cookware or selecting the cookware sizes than **cooking zones**.
- 3) definition of standardised cookware also for big **cooking zone** sizes:
  - For a high reproducibility a standardised cookware shall be used. Therefore a self made cookware is defined up to a size of 330 mm bottom diameter. Evaporating water by holes in the lid simulates a cooking process on a higher temperature level. The thermal energy which is needed to keep at boiling point for a real cooking process including evaporation and the energy uptake of the food during the simmering phase is considered by the holes.
- 4) additional requirements (according to EN 50564) how to measure low power modes.

#### 5) under consideration:

A control procedures for checking measured values in comparison to values declared by the manufacturer under consideration of permitted tolerances. WG10 with the support and sponsorship of CECED believes that it is fundamental to proceed with a Round Robin Test procedure of this draft amendment to confirm requirements of repeatability and reproducibility and to estimate the standard deviation of the method itself.

Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 60350-2:2011 are prefixed "Z".

Words in **bold** in the text are defined in Clause 3.

According to the decision D137/061 for CLC/TC 59X, this European Standard has been drawn up as a document which follows, as far as suitable, the structure of IEC 60350-2:2011.

It also describes the evaluation of data declared by the manufacturer and control procedures for checking these values.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association.

This European Standard is suitable for direct comparison and is considered sufficiently reproducible within given limits for the purpose of setting the ecodesign requirements for hobs according to the Directive ERP 2009/125/EC.

#### **Endorsement notice**

The text of the International Standard IEC 60350-2:2011 was approved by CENELEC as a European Standard with agreed common modifications.

#### **COMMON MODIFICATIONS**

#### General

Replace all "hotplates" by "cooking zones" except "solid hotplates" and "tubular hotplates".

#### 2 Normative references

Replace IEC 62301:2005 by

EN 50564:2011, Electrical and electronic household and office equipment – Measurement of low power consumption (IEC 62301:2011, mod.)

Add the following references:

HD 60364-5-54, Low-voltage electrical installations – Part 5-54: Selection and erection of electrical equipment – Earthing arrangements and protective conductors (IEC 60364-5-54)

EN ISO 80000-1:2013, Quantities and units – Part 1: General (ISO 80000-1:2009 + Cor 1:2011)

EN 10088-2, Stainless steels — Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes

koniec náhľadu – text ďalej pokračuje v platenej verzii STN