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Electric cooking ranges, hobs, ovens and grills for household use - Methods for measuring performance

Elektrische Herde, Kochmulden, Backöfen und Grillgeräte für den Hausgebrauch - Verfahren zur Messung der Gebrauchseigenschaften

Cuisinières, foyers de cuisson, fours électriques et grils à usage domestique - Méthodes de mesure de l'aptitude à la fonction

**Ta slovenski standard je istoveten z: EN 50304:2009/prAA:2009**

**ICS:**

97.040.20	<del>           ¥c`ãã) ã ãã^ [ ç} ã`  ãÉ            ]^ ã^/ã Á [ ã [ à} ãã] ãããã         </del>	Cooking ranges, working tables, ovens and similar appliances
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**SIST EN 50304:2009/oprAA:2010 en**



EUROPEAN STANDARD

NORME EUROPÉENNE  
EUROPÄISCHE NORM**DRAFT**  
**EN 50304**  
**EN 60350**  
**prAA**

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English version

**Electric cooking ranges, hobs, ovens and grills for household use -  
Methods for measuring performance**Cuisinières, foyers de cuisson, fours  
électriques et grils à usage domestique -  
Méthodes de mesure de l'aptitude  
à la fonctionElektrische Herde, Kochmulden, Backöfen  
und Grillgeräte für den Hausgebrauch -  
Verfahren zur Messung der  
Gebrauchseigenschaften

This draft amendment prAA, if approved, will modify the European Standard EN 50304:2009/EN 60350:2009; it is submitted to CENELEC members for CENELEC enquiry.  
Deadline for CENELEC: 2010-02-05.

It has been drawn up by CLC/TC 59X.

If this draft becomes an amendment, CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

This draft amendment was established by CENELEC 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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**CENELEC**European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung**Central Secretariat: Avenue Marnix 17, B - 1000 Brussels**

## Foreword

This draft amendment to the double-numbered European Standard EN 50304:2009/EN 60350:2009 was prepared by the Working Group WG 5 'Induction cooking' of the Technical Committee CENELEC TC 59X, Performance of household and similar electrical appliances; this has been worked out in cooperation with members of CEN TC 194/WG 1/SG 2 ad-hoc group 'Cookware', after decision of CLC/TC 59X, submitting the task to establish a measuring method for the cookware detection system which shall be applicable for different sizes of cooking zones and cookware and independent of any particular brand of induction hob and cookware.

This draft amendment is submitted to a second CENELEC enquiry for acceptance as future A1 to EN 50304:2009/EN 60350:2009.

### **CLC/TC 59X note:**

Even if the first enquiry formally was approved several comments during the first CENELEC enquiry have been taken into account; the relevant modifications are highlighted in yellow colour.

Several comments received during the first CENELEC formal vote have been taken into account to ensure a higher percentage of acceptance; the relevant modifications are highlighted in green colour.

These coloured backgrounds have been used to identify the modifications clearly and will be deleted for the next approval step.

Clauses, subclauses, notes, tables and figures which are additional to those in IEC 60350:1999 are prefixed "Z".

**Text of prAA to EN 50304:2009  
EN 60350:2009****3 Definitions**

*After 3.18, add the following new definition:*

**3.Z1****working diameter**

diameter which will be declared by the induction hob manufacturers and is determined according to 7.Z1.2

**4 List of measurements****4.2 Hotplates and cooking zones**

*After the third dash item, add the following new dash item:*

- **Smallest detected diameter** for induction hobs (see 7.Z1).

**7 Hotplates and cooking zones**

*After 7.4.2, add the following new subclause:*

**7.Z1 Smallest detected diameter****7.Z1.1 Test purpose**

Induction hobs may incorporate an electronic **cookware** detection means which automatically cuts off the power to the **cooking zone** concerned when no **cookware** or a **cookware** with a too small diameter is placed on the **cooking zone**, or a detected **cookware** is removed from the **cooking zone**.

The purpose of the test method is to determine **the pan with** the smallest **working** diameter **declared by the cookware manufacturer** which is detected on the **cooking zone** under test.

**NOTE 1** The detected diameter – measured with a disc - may not be identical to a base diameter of a cookware. This depends from the design and material of cookware.

**Secretary's note:** A method to determine the suitable cookware for induction cooking zones is in progress and will be included in CEN/TS 12983.

**NOTE 2** The purpose of this test is not to grant a specific power to this smallest **working** diameter.

**7.Z1.2 Test procedure**

Discs as defined in Figure Z1 are used, each being at ambient temperature at the beginning of the test. The test is started with a disc with a diameter which definitely will not be detected by the **cooking zone** to be tested.

Place the disc in the centre of the **cooking zone** marked on the appliance. Set the control to the lowest power level. If the disc is not detected by the **cookware** detection means, the test is to be done with a disc having a 5 mm larger diameter. This procedure is to be repeated until a disc is detected and is working continuously for at least 1 min.

The found detected diameter shall be verified in the hot condition. To do this: Bring up the amount of water according to Table 1 to the boiling point at maximum possible power level simultaneously on all **cooking zones** available on the **hob**. For that test any suitable cookware which covers the size of the **cooking zone** should be used. For cooking zones with a diameter larger than 220 mm use 3,5 l of water. Remove the cookware after the water on one **cooking zone** has started boiling. Check detection with the discs separately on each **cooking zone** over the whole voltage range of 230 V (+ 10 % - 6 %) within 2 min.

If verifying fails the test is to be repeated with the next larger diameter of the disc.

The **smallest detected** diameter is defined as the smallest diameter of the disc which was detected under all conditions mentioned above.

After Figure 12, add the following figure:

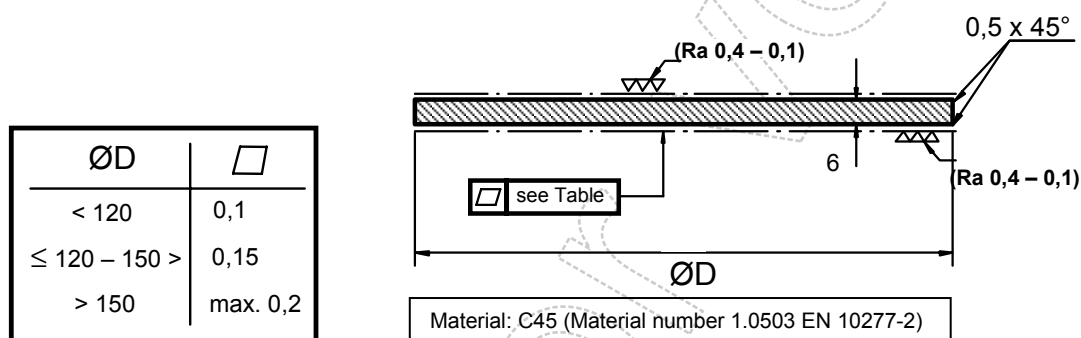


Figure Z1 – Disc to determine the **smallest detected** diameter

## Bibliography

Add to the following references:

EN 10277-2, Bright steel products – Technical delivery conditions – Part 2: Steels for general engineering purposes

CEN/TS 12983-3, Cookware – Domestic cookware for use on top of a stove, cooker or hob – Part 3: Cookware for use on induction heating sources