

# SLOVENSKI STANDARD

## SIST EN 60335-2-36:1997

01-junij-1997

Nadomešča:

SIST EN 60335-2-36:1995

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**Safety of household and similar electrical appliances - Part 2: Particular requirements for commercial electric cooking ranges, ovens, hobs and hob elements (IEC 335-2-36:1993, modified)**

Safety of household and similar electrical appliances -- Part 2-36: Particular requirements for commercial electric cooking ranges, ovens, hobs and hob elements

**iTeh STANDARD PREVIEW**

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke -- Teil 2-36: Besondere Anforderungen für elektrische Herde, Brat- und Backöfen und Kochplatten für den gewerblichen Gebrauch

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Sécurité des appareils électrodomestiques et analogues -- Partie 2-36: Règles particulières pour les cuisinières, les fours, les tables de cuisson et les foyers de cuisson électriques à usage collectif

**Ta slovenski standard je istoveten z: EN 60335-2-36:1995**

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**ICS:**

97.040.20	Štedilniki, delovni pulti, pečice in podobni aparati	Cooking ranges, working tables, ovens and similar appliances
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**SIST EN 60335-2-36:1997**

**en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 60335-2-36**

June 1995

ICS 97.040.20

Supersedes EN 60335-2-36:1989 and its amendments

Descriptors: Household electrical appliances, cookers, ovens, hob elements, appliance for commercial use, safety requirements, protection against electric shock, fire protection, protection against mechanical hazard

English version

**Safety of household and similar electrical appliances**  
**Part 2: Particular requirements for commercial electric cooking ranges,**  
**ovens, hobs and hob elements**  
(IEC 335-2-36:1993, modified)

Sécurité des appareils  
électrodomestiques et analogues  
Partie 2: Règles particulières pour les  
cuisinières, les fours, les tables de  
cuisson et les foyers de cuisson  
électriques à usage collectif  
(CEI 335-2-36:1993, modifiée)

Sicherheit elektrischer Geräte für den  
Hausgebrauch und ähnliche Zwecke  
Teil 2: Besondere Anforderungen für  
elektrische Herde, Brat- und Backöfen  
und Kochplatten für den gewerblichen  
Gebrauch  
(IEC 335-2-36:1993, modifiziert)

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This European Standard was approved by CENELEC on 1995-05-15. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**CENELEC**

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

### Foreword

The proposal to endorse IEC 335-2-36:1993, document CLC/TC 61 (SEC) 923, was circulated under the enquiry procedure in September 1993. This proposal was discussed during the Oslo meeting in April 1994, when it was decided to submit a draft for EN 60335-2-36 the formal vote.

This draft was circulated in November 1994 and was ratified by CENELEC as EN 60335-2-36 on 1995-05-15.

This European Standard has been prepared by the secretariat of CENELEC Technical Committee TC 61.

The following dates are applicable:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1996-01-01
- latest date by which national standards conflicting with the EN have to be withdrawn (dow) 1998-01-01

For products which have complied with EN 60335-2-36:1989 including its amendments A51:1991 and A1:1992 before 1998-01-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2003-01-01.

This standard has to be used in conjunction with EN 60335-1, Safety of household and similar electrical appliances, Part 1: General requirements. It was established on the basis of the 1994 edition of that standard. Amendments and revisions of part 1 have also to be taken into account and the dates when such changes become applicable will be stated in the relevant amendment or revision of part 1.

This part 2 supplements or modifies the corresponding clauses of EN 60335-1, so as to convert it into the European Standard: Safety requirements for commercial electric cooking ranges, ovens, hobs and hob elements.

Where a particular subclause of part 1 is not mentioned in this part 2, that subclause applies as far as is reasonable. Where this standard states "addition", "modification" or "replacement", the relevant text of part 1 is to be adapted accordingly.

Subclauses, notes, tables and figures which are additional to those in part 1 are numbered starting from 101.

There are no special national conditions causing a deviation from this European Standard, other than those listed in annex ZA to EN 60335-1.

There are no national deviations from this European Standard other than those listed in annex ZB to EN 60335-1.

NOTE - The following print types are used:

- requirements: in roman type;
- test specifications: in italic type;
- notes: in small roman type.

Words in **bold** in the text are defined in clause 2. When a definition of part 1 concerns an adjective, the adjective and the associated noun are also in bold.

p In this document p is used in the margin to indicate instructions for preparing the printed version.

**Endorsement notice**

The text of the International Standard IEC 335-2-36:1993 was approved by CENELEC as a European Standard with agreed common modifications as given below.

**COMMON MODIFICATIONS**

- 29 Creepage distances, clearances and distances through insulation**
- p 29.1 In the first paragraph, replace "250 V (354 V peak)" by "480 V (680 V peak)".
- p Delete the first two lines in table 101 and replace "630" by "680".
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NORME  
INTERNATIONALE  
INTERNATIONAL  
STANDARD

CEI  
IEC  
335-2-36

Troisième édition  
Third edition  
1993-08

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**Sécurité des appareils électrodomestiques  
et analogues**

**Partie 2:**

Règles particulières pour les cuisinières, les fours,  
les tables de cuisson et les foyers de cuisson  
électriques à usage collectif

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**Safety of household and similar electrical  
appliances**

**Part 2:**

Particular requirements for commercial electric  
cooking ranges, ovens, hobs and hob elements

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Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

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For price, see current catalogue

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES

Part 2: Particular requirements for commercial electric  
cooking ranges, ovens, hobs and hob elements

## FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international cooperation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters, prepared by technical committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 3) They have the form of recommendations for international use published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.

This part of International Standard IEC 335 has been prepared by sub-committee 61E: Safety of electrical commercial catering equipment, of IEC technical committee 61: Safety of household and similar electrical appliances.

It forms the third edition of IEC 335-2-36 and replaces the second edition and its amendment 1.

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

DIS	Report on voting
61E(CO)119	61E(CO)121

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

This part 2 is to be used in conjunction with the latest edition of IEC 335-1 and its amendments. It was established on the basis of the third edition (1991) of that standard.

This part 2 supplements or modifies the corresponding clauses in IEC 335-1, so as to convert it into the IEC standard: Safety requirements for commercial electric cooking ranges, ovens, hobs and hob elements.

Where a particular subclause of part 1 is not mentioned in this part 2, that subclause applies as far as is reasonable. Where this standard states "addition", "modification" or "replacement", the relevant text in part 1 is to be adapted accordingly.

#### NOTES

- 1 The following print types are used.
  - requirements: in roman type;
  - *test specifications: in italic type;*
  - notes: in small roman type.Words in **bold** in the text are defined in clause 2.
- 2 Subclauses, notes and figures which are additional to those in part 1 are numbered starting from 101.

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## SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES

### Part 2: Particular requirements for commercial electric cooking ranges, ovens, hobs and hob elements

#### 1 Scope

This clause of part 1 is replaced by:

This standard deals with the safety of electrically operated commercial **cooking ranges, ovens, hobs, hob elements** and similar appliances not intended for household use, their **rated voltage** being not more than 250 V for single phase appliances connected between one phase and neutral and 480 V for other appliances.

NOTE 1 - These appliances are used for example in kitchens such as in restaurants, canteens, hospitals and commercial enterprises such as bakeries, butcheries, etc.

The electrical part of appliances making use of other forms of energy is also within the scope of this standard.

So far as is practicable, this standard deals with the common hazards presented by these types of appliances.

NOTE 2 - Attention is drawn to the fact that:

- for appliances intended to be used in vehicles or on board ships or aircraft, additional requirements may be necessary; <https://standards.iteh.ai/catalog/standards/sist/6930cc0d-acc4-4c4d-946a-11d07426-3121-4635-2-36-1997>
- for appliances intended to be used in tropical countries, special requirements may be necessary;
- in many countries additional requirements are specified by the national health authorities, the national authorities responsible for the protection of labour, the national water supply authorities and similar authorities.

This standard does not apply to:

- appliances designed exclusively for industrial purposes;
- appliances intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas);
- continuous process appliances for the mass production of food;
- microwave ovens;
- steam-convection ovens;
- forced convection ovens (IEC 335-2-42);
- steam cookers (IEC 335-2-46);
- hot cupboards (IEC 335-2-49).

## 2 Definitions

This clause of part 1 is applicable except as follows:

### 2.2.4 Addition:

NOTE - The **rated power input** is the sum of the power inputs of all the individual elements in the appliance which can be on at one time; where several such combinations are possible that giving the highest power input is used in determining the **rated power input**.

### 2.2.9 Replacement:

**normal operation:** Operation of the appliance under the following conditions:

– **Solid hob elements** are operated with no load and sheathed **hob elements** are operated with a load made of dull black, cold or hot rolled steel, 9 mm to 10 mm thick, which covers not less than 90 % and not more than 100 % of the element surface. The **hob elements** are operated with the controls set to give the temperatures as set out below, the temperature being measured at the geometrical centre or the hottest point of the solid element or load, if the element is unevenly heated.

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Stepped controls are set to the first position which gives a temperature equal to or greater than 275 °C. Cycling controls are set so that the mean value of the temperature over the cycle is 275 °C ± 5 °C. If this temperature cannot be reached, the control is set at the maximum.

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– **Non-induction heating sources** beneath a glass-ceramic or similar material are operated with a pan or pans containing initially cold water, the pan(s) being filled to a height of 60 mm ± 10 mm. The pan or pans are of aluminium, of ordinary quality, not brightly polished with a base concavity not exceeding 0,1 mm. The pan or pans shall cover the **cooking zone** to the greatest extent possible.

The pan or pans are covered with a lid. The controls are set at maximum until the water boils and then adjusted to maintain boiling. Water is added to maintain the water level during boiling.

– **Induction heating sources** beneath a glass-ceramic or similar material are operated with the pan or pans recommended by the manufacturer.

If one pan is used, it shall cover as closely as possible but not less than the full area of the **cooking zone**. The pan is positioned centrally.

For non-circular **cooking zones** a combination of the smallest number of pans is chosen to cover as much as possible the area of the **cooking zone**.

The pan or pans in each case are filled with initially cold frying oil to a height of 30 mm ± 5 mm. The controls are set to maximum until the temperature of the oil attains a value of 180 °C and then adjusted to maintain the oil at a temperature of 180 °C ± 15 °C.