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Plinski kuhalni aparati za gospodinjstvo – 1.1. del: Varnost – Splošno

Domestic cooking appliances burning gas fuel - Part 1-1: Safety - General

Haushalt-Kochgeräte für gasförmige Brennstoffe - Teil 1-1: Sicherheit - Allgemeines

Appareils de cuisson domestiques utilisant les combustibles gazeux - Partie 1-1:
Sécurité - Généralités

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EUROPEAN STANDARD

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English version

Domestic cooking appliances burning gas fuel - Part 1-1: Safety - General

Appareils de cuisson domestiques utilisant les
combustibles gazeux - Partie 1-1: Sécurité - Généralités

Haushalt-Kochgeräte für gasförmige Brennstoffe - Teil 1-1:
Sicherheit - Allgemeines

This European Standard was approved by CEN on 18 January 1997.

CEN 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 CEN 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 CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 49 "Gas cooking appliances", the secretariat of which was held by AFNOR and is now held by UNI, according to the reallocation decided by Resolution BT 50/1996.

This European Standard supersedes EN 30:1979, EN 30:1979/A2:1980, EN 30:1979/A3 MOD.2:1995 and HD 1003:1990.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 1998 and conflicting national standards shall be withdrawn at the latest by September 1998.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative annex ZA, which is an integral part of this standard.

Within this scope, Part 1-1 of this standard "Safety", is supplemented by a Part 1-2 "Rational use of energy". These two parts replace the EN 30:1985.

Matters relating to quality assurance systems, production testing and certificates of conformity, including those for auxiliary devices, are not dealt with in this standard.

Requirements concerning the emission of NO_x are not mentioned in this European standard, taking account of the usage of the appliances and their low output, their contribution to environment pollution is negligible.

NOTE : "For countries requesting special categories (specified in EN 437:1993), the absence of specific information concerning A.3.3 and A.3.4. implies that the general requirements (see 5.2.3 and 5.1.1) also apply for particular categories.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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1 Scope

This standard specifies the construction and performance characteristics as well as the requirements and methods of test for the safety and marking of freestanding and built-in domestic cooking appliances burning the combustible gases given in 4.1 according to the categories specified in 4.2, referred to in the text as "appliances".

This standard covers the following types of domestic cooking appliances, as defined in clause 3, and belonging to the classes defined in 4.3 (see table 1) :

- independent freestanding hotplates ;
- independent built-in hotplates ;
- independent hotplates and grills ;
- table cookers ;
- freestanding ovens ;
- built-in ovens ;
- freestanding or built-in grills ;
- griddles ;
- freestanding cookers ;
- built-in cookers.

Unless specifically excluded hereafter, this standard applies to these appliances or their component parts, whether or not the component parts are independent or incorporated into a single appliance, even if the other heating components of the appliance use electrical energy (e.g. combined gas-electric cookers).

This standard includes requirements covering the electrical safety of equipment incorporated in the appliance that is associated with the use of gas. It does not include requirements covering the electrical safety of electrically-heated component parts of their associated equipment¹⁾.

This standard does not apply to:

- outdoor appliances ;
- appliances connected to a combustion products evacuation duct ;
- appliances having a pyrolytic gas oven ;
- appliances having covered burners which are not in conformity with the constructional requirements of 5.2.8.2.2 ;
- appliances incorporating flame supervision devices and having an automatic ignition device for which the duration of the ignition attempt is limited by design ;

¹⁾ Refer to the electrical safety rules.

- appliances equipped with a burner that is periodically ignited and extinguished under the control of an automatic on/off device ;
- appliances equipped with an oven and/or with a grill having a fan :
 - . either for the supply of combustion air or for the evacuation of the products of combustion ;
 - . or for the circulation of the products of combustion within the compartments ;
- appliances supplied at pressures greater than those defined in 7.1.2 ;
- appliances equipped with a compartment in which a burner and an electric heating element can function simultaneously.

This standard does not cover the requirements relating to third family gas cylinders, their regulators and their connection.

This standard only covers type testing.

Table 1 : Three-language table of the names of the different types of domestic cooking appliances

- Tables de cuisson isolées	- Freistehend Kochteile	- Independent hotplates - freestanding
- Tables de cuisson à encastrer	- Eingebaut Kochteile	- Independent hotplates - built-in
- Tables-grilloirs	- Kocher mit Strahlungsgrillein-richtung	- Independent hotplates and grill
- Réchauds-fours	- Tischherde	- Table cookers
- Fours :	- Backöfen	- Ovens
- isolés	- Freistechende	- freestanding
- encastrés	- Einbaubacköfen	- built-in
- Grilloirs par rayonnement :	- Strahlungsgrilleinrichtungen	- Grills
- isolés	- Freistehend	- freestanding
- encastrés	- Eingebaut	- built-in
- Grilloirs par contact	- Kontaktgrilleinrichtungen	- Griddles
- Cuisinières isolées	- Freistehend Herde	- Cookers - freestanding
- Cuisinières encastrées	- Eingebaut Herde	- Cookers - build-in

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 88	1991	Pressure governors for appliances for inlet pressures up to 200 mbar
EN 125	1991	Flame supervision devices for gas-burning appliances - Thermo-electric flame supervision devices
EN 257	1992	Mechanical thermostats for gas-burning appliances
EN 437	1993	Test gases - Test pressures - Appliance categories
EN 60335-1	1988	Safety of household and similar electrical appliances - Part 1 : General requirements
EN 60335-2-6	1990	Safety of household and similar electrical appliances - Part 2 : Particular requirements for cooking ranges, cooking tables, ovens and similar appliances for household use
EN 60730-2-1	1992	Automatic electrical controls for household and similar use - Part 2 : Particular requirements for electrical controls for electrical household appliances
IEC 335-1	1991	Safety of household and similar electrical appliances - Part 1 : General requirements
		NOTE : This reference is only used in annex F.
IEC 479-1	1994	Guide to effects of current passing through the human body - Part 1: General aspects
IEC 479-2	1987	Guide to effects of current passing through the human body - Part 2: Special aspects relating to human beings
IEC 584-1	1995	Thermocouples - Part 1: Reference tables
ISO 7-1	1982	Pipe threads where pressure-tight joints are made on the threads - Part 1 : Designation, dimensions and tolerances
ISO 228-1	1982	Pipe threads where pressure-tight joints are not made on the threads - Part 1 : Designation, dimensions and tolerances
ISO 868	1985	Plastics and ebonite - Determination of indentation hardness by means of a durometer (Shore hardness)
ISO 3166	1988	Codes for the representation of names of countries

ISO 5732	1978	Kitchen equipment - Sizes of openings for built-in appliances
ISO 6976	1995	Natural gas - Calculation of calorific values, density and relative density and Wobbe index from composition
CR 1472	1994	General guidance for the marking of gas appliances

3 Definitions

For the purposes of this standard, the following definitions apply :

3.1 General definitions

3.1.1 conversion

An operation carried out by a specialist on an appliance at the time of a change of gas.

3.1.2 removable

That which can be removed without the aid of a tool.

3.1.3 reference conditions

15 °C, 1 013,25 mbar.

3.1.4 mechanically fastened

That which can only be removed with the aid of a tool.

3.1.5 normal maintenance

Maintenance carried out by a specialist not including any replacement of parts.

3.1.6 soft soldering

Soldering for which the lowest temperature of the melting range, after application, is less than 450 °C.

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3.1.7 direct country of destination

A country for which the appliance has been certified and which is specified by the manufacturer as the intended country of destination. At the time of putting the appliance on the market and/or installation, the appliance shall be capable of operating, without adjustment or modification, with one of the gases distributed in the country concerned, at the appropriate supply pressure.

More than one country can be specified if the appliance, in its current state of adjustment, can be used in each of these countries.

3.1.8 indirect country of destination

A country for which the appliance has been certified, but for which, in its present state of adjustment, it is not suitable. Subsequent modification or adjustment is essential in order that it can be utilised safely and correctly in this country.

3.2 Definitions relating to the appliance

3.2.1 appliance incorporating a cylinder

An appliance functioning in particular with third family gases which includes a compartment for the cylinder.

3.2.2 freestanding appliance

An appliance not normally having direct contact with adjacent furniture or walls.

3.2.3 appliance for building-in between two furniture units

An appliance which can have its side panels in direct contact with adjacent furniture units. When installed, the appliance may only be in contact with a single furniture unit.

3.2.4 appliance for building into a furniture unit

An appliance intended to be installed in a kitchen cabinet or unit or in a housing located in a wall or under similar conditions.

For this reason, the appliance may not necessarily have a casing on all sides.

3.2.5 domestic cooking appliance

An appliance to be used by private individuals in a domestic dwelling. This is indicated in the instructions for use and maintenance as well as in the technical instructions.

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3.2.6 cooker

A cooking appliance comprising:
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- a hotplate ;
- one or more ovens with or without a thermostat, having possibly a grill ;
- possibly a grill.

3.2.7 table cooker

A cooking appliance intended to rest on a raised support or stand. It consists of :

- a hotplate ;

- an oven ;
- possibly a grill.

3.2.8 independent hotplate

A cooking appliance consisting only of a hotplate.

3.2.9 independent hotplate and grill

A cooking appliance consisting of hotplate and a grill.

3.3 Definitions relating to gases and pressures

3.3.1 Definitions relating to gases

3.3.1.1 test gases

Gases used to verify the performance characteristics of gas-burning appliances. They include reference gases and limit gases.

Table 7 gives the characteristics of reference gases and limit gases.

3.3.1.2 reference gases

Test gases with which appliances operate under rated conditions when supplied at the corresponding normal pressure.

3.3.1.3 limit gases

Test gases representative of the extreme variations in characteristics of the gases which the appliances are designed to use.

3.3.1.4 density

The ratio of the masses of equal volumes of dry gas and dry air under the same temperature and pressure conditions : 15 °C and 1 013,25 mbar.1999

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3.3.1.5 calorific value

The quantity of heat produced by combustion at a constant pressure of 1 013,25 mbar, of a unit volume or mass of gas, the constituents of the combustion mixture being under reference conditions and the combustion products being brought to the same conditions.

There are two types of calorific value :

- the gross calorific value : the water produced by combustion is considered to be condensed.

Notation : H_g

- the net calorific value : the water produced by combustion is considered to be in vapour state.

Notation : H_i

Units :

- either megajoules per cubic metre of dry gas under reference conditions (MJ/m^3) ;
- or megajoules per kilogramme of dry gas (MJ/kg).

In this standard only the gross calorific value is used.

3.3.1.6 Wobbe number

The ratio between the calorific value of a gas per unit volume and the square root of its density under the same reference conditions. The Wobbe number is said to be gross or net depending on whether the calorific value is the gross or net calorific value.

Notation : gross Wobbe number : W_g ; net Wobbe number : W_i .

Units :

- megajoules per cubic metre of dry gas under reference conditions (MJ/m^3).

In this standard only the gross Wobbe number is used.

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3.3.1.7 theoretical air

The volume of air necessary for the stoichiometric combustion of a unit volume of gas.

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3.3.2 Definitions relating to pressures

3.3.2.1 gas supply pressure

The difference between the static pressure measured at the inlet connection of the appliance in operation and the atmospheric pressure.