SLOVENSKI STANDARD
oSIST prEN 30-1-1:2017

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Plinski kuhalni aparati za gospodinjstvo - 1-1. del: Varnost - Splošno

Domestic cooking appliances burning gas - 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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English Version

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

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 49.

If this draft becomes a European Standard, 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

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European foreword

This document (prEN 30-1-1:2017) has been prepared by Technical Committee CEN/TC 49 "Gas cooking appliances", the secretariat of which is held by UNI.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 30-1-1:2008+A3:2013.

This document 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 document.

The main modification in this standard with reference to the previous edition (EN 30-1-1:2008+A3:2013) are the following:

— Alignment with Regulation 2016/426/EU throughout the full text;

— Reference to the different types of gases is now given by making reference to the specific EN 437:2003+A1:2009 and not by introducing its requirements in this Standard (various clauses and Annex A);

— Reference to specific requirements for multifunctional controls is now given by making reference to the specific EN 126:2012 (5.2.14);

— Addition of requirements for appliances that enable the user to program the end of a cooking cycle (5.2.13);

— Removal of requirements for ovens volume calculation as reference is made to EN 15181:2017;

— Removal of requirements for pilot flames as they are no more used on appliances (7.3.1.3.2);

— Introduction of requirements on accuracy of instruments (7.4);

— More detailed info on types of inlets allowed for the connection of the appliances (5.2.6 and A.7).

EN 30 consists of the following parts:

— prEN 30-1-1, *Domestic cooking appliances burning gas — Part 1-1: Safety - General*;

— EN 30-1-2, *Domestic cooking appliances burning gas — Safety — Part 1-2: Appliances having forced-convection ovens and/or grills*;

— EN 30-1-3, *Domestic cooking appliances burning gas — Part 1-3: Safety — Appliances having a glass ceramic hotplate*;

— EN 30-1-4, *Domestic cooking appliances burning gas — Safety — Part 1-4: Appliances having one or more burners with an automatic burner control system*;

— EN 30-2-1, *Domestic cooking appliances burning gas — Part 2-1: Rational use of energy — General*;

— EN 30-2-2, *Domestic cooking appliances burning gas — Part 2-2: Rational use of energy — Appliances having forced-convection ovens and/or grills*.

Requirements concerning the emission of NOx 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.

This European Standard covers type testing.

1 Scope

This European Standard specifies the construction and or 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”.

The appliances covered by this standard are intended to be used by non-expert users in a **domestic dwelling**.

This European 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 hobs;

— independent built-in hobs;

— hobs 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 European 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 European 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 or their associated equipment[1)].

For appliances intended to be used in caravans, or motorhomes/mobile homes or on board of ships or aircraft, additional requirements may be necessary.

This European Standard does not apply to:

a) outdoor appliances;

b) appliances connected to a combustion products evacuation duct;

c) appliances having a pyrolytic gas oven;

d) appliances having covered burners which do not comply with the constructional requirements of 5.2.8.2.2;

1) See the electrical safety rules.

e) appliances incorporating flame supervision devices and having an automatic ignition device for which the duration of the ignition attempt is limited by design;

f) appliances equipped with a burner that is periodically ignited and extinguished under the control of an automatic on/off device;

g) appliances equipped with an oven and/or with a grill having a fan:

1) either for the supply of combustion air or for the evacuation of the products of combustion;

2) or for the circulation of the products of combustion within the compartments;

h) appliances supplied at pressures greater than those defined in 7.1.2;

i) appliances incorporating one or more hob or grill burners that enable the user to program the delayed start of the cooking cycle;

j) appliances of categories I_{2N}, I_{2R}, I_{3R}, $I_{2E(S)}$, $I_{2E(R)}$, I_{2Esi}, I_{2Er}, I_{2R} and the equivalent double and triple categories which include these indices;

k) appliances of category $II_{2E+3B.}$

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

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

French	German	English
- Tables de cuisson isolées	- Freistehende Kochteile	- Hobs - freestanding
- Tables de cuisson à encastrer	- Eingebaute Kochteile	- Hobs - built-in
- Tables-grilloirs	- Kochteile mit Strahlungsgrilleinrichtung	- Hobs and grill
- Réchauds-fours	- Tischherde	- Table cookers
- Fours isolés	- Freistehende Backöfen	- Ovens - freestanding
- Fours à encastrer	- Einbaubacköfen	- Ovens - built-in
- Grilloirs par rayonnement isolés	- Freistehende Strahlungsgrilleinrichtungen	- Grills - freestanding
- Grilloirs par rayonnement à encastrer	- Eingebaute Strahlungsgrilleinrichtungen	- Grills - built-in
- Grilloirs par contact	- Kontaktgrilleinrichtungen	- Griddles
- Cuisinières isolées	- Freistehende Herde	- Cookers - freestanding
- Cuisinières encastrées	- Eingebaute Herde	- Cookers - built-in

2 Normative references

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.

EN 88-1:2011+A1:2016, *Pressure regulators and associated safety devices for gas appliances — Part 1: Pressure regulators for inlet pressures up to and including 50 kPa*

EN 125:2010+A1:2015, *Flame supervision devices for gas burning appliances — Thermoelectric flame supervision devices*

EN 126:2012, *Multifunctional controls for gas burning appliances*

EN 257:2010, *Mechanical thermostats for gas-burning appliances*

EN 437:2003+A1:2009, *Test gases — Test pressures — Appliance categories*

EN 549:1994, *Rubber materials for seals and diaphragms for gas appliances and gas equipment*

EN 751-1:1996, *Sealing materials for metallic threaded joints in contact with 1st, 2nd and 3rd family gases and hot water — Part 1: Anaerobic jointing compounds*

EN 751-2:1996, *Sealing materials for metallic threaded joints in contact with 1st, 2nd and 3rd family gases and hot water — Part 2: Non-hardening jointing compounds*

EN 1106:2010, *Manually operated taps for gas burning appliances*

EN 1116:2004, *Kitchen furniture — Co-ordinating sizes for kitchen furniture and kitchen appliances*

EN 10226-1:2004, *Pipe threads where pressure tight joints are made on the threads — Part 1: Taper external threads and parallel internal threads - Dimensions, tolerances and designation*

EN 10226-2:2005, *Pipe threads where pressure tight joints are made on the threads — Part 2: Taper external threads and taper internal threads - Dimensions, tolerances and designation*

EN 15181:2017, *Measuring method of the energy consumption of gas fired ovens*

EN 60068-2-75:2014, *Environmental testing — Part 2-75: Tests — Test Eh: Hammer tests (IEC 60068-2-75:2014)*

EN 60335-1:2012, *Household and similar electrical appliances — Safety — Part 1: General requirements (IEC 60335-1:2010, modified)*

EN 60335-2-6:2015, *Household and similar electrical appliances — Safety — Part 2-6: Particular requirements for stationary cooking ranges, hobs, ovens and similar appliances (IEC 60335-2-6:2014, modified)*

EN 60335-2-102:2016, *Household and similar electrical appliances — Safety — Part 2-102: Particular requirements for gas, oil and solid-fuel burning appliances having electrical connections (IEC 60335-2-102:2004+A1:2008+A2:2012, modified)*

EN 60584-1:2013, *Thermocouples — Part 1: EMF specifications and tolerances (IEC 60584-1:2013)*

EN 60730-1:2016, *Automatic electrical controls — Part 1: General requirements (IEC 60730-1:2013, modified)*

EN 60730-2-7:2010, *Automatic electrical controls for household and similar use — Part 2-7: Particular requirements for timers and time switches (IEC 60730-2-7:2008, modified)*

EN ISO 228-1:2003, *Pipe threads where pressure-tight joints are not made on the threads — Part 1: Dimensions, tolerances and designation (ISO 228-1:2000)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 General terms and definitions:

3.1.1
conversion
operation carried out by a specialist on an appliance at the time of a change of gas

3.1.2
removable
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
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

3.1.7
direct country of destination
intended country of destination, such that, at the time of putting the appliance on the market and/or installation, the appliance needs to be capable of operating, without adjustment or modification, with one of the gases distributed in the country concerned, at the appropriate supply pressure

Note 1 to entry: 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
country for which the appliance is intended but for which, in its present state of adjustment, it is not suitable

Note 1 to entry: A subsequent modification or adjustment is essential so that it can be utilized safely and correctly in this country.

3.2 Terms and definitions relating to the appliance:

3.2.1
appliance incorporating a cylinder
appliance functioning in particular with third family gases which includes a compartment for the cylinder

3.2.2
freestanding appliance
appliance not normally having direct contact with adjacent furniture or walls

3.2.3
appliance for building-in between two furniture units
appliance which can have its side panels in direct contact with adjacent furniture units

Note 1 to entry: When installed, the appliance may only be in contact with a single furniture unit.

3.2.4
appliance for building into a furniture unit
appliance intended to be installed in a kitchen cabinet or unit or in a housing located in a wall or under similar conditions

Note 1 to entry: For this reason, the appliance may not necessarily have a casing on all sides.

3.2.5
domestic cooking appliance

appliance bound to be used by private individuals in a domestic dwelling

3.2.6
domestic dwelling
household environment in which appliances for typical housekeeping functions (e.g. cooking) are used by non-expert users

EXAMPLE Examples of household environment are:

— house or apartments;

— shops, offices and other similar working environments;

— farm houses;

— hotels, motels, bed and breakfast and other residential type environments where appliances are used by non-expert users.

Note 1 to entry: This is indicated in the instructions for use and maintenance as well as in the technical instructions.

3.2.7
cooker
cooking appliance comprising:

— a hob;

— one or more ovens with or without a thermostat, having possibly a grill;

— possibly a grill

3.2.8
table cooker
cooking appliance intended to rest on a raised support or stand comprising:

— a hob;

— an oven;

— possibly a grill

3.2.9
hob
appliance or part of an appliance which incorporates one or more burners including a control unit and which is heated by gas

Note 1 to entry: The hob can be free standing, built in or part of a cooker assembly.

3.2.10
hob and grill
cooking appliance consisting of a hob and a grill

3.3 Terms and definitions relating to gases and pressures:

3.3.1 Terms and definitions relating to gases:

3.3.1.1
test gases
gases intended for the verification of the operational characteristics of appliances using combustible gases; they consist of reference gases and limit gases

Note 1 to entry: Table 7 in EN 437:2003+A1:2009, Clause 7 gives the characteristics of reference gases and limit gases.

3.3.1.2
reference gases
test gases with which appliances operate under nominal conditions when they are supplied at the corresponding normal pressure

3.3.1.3
limit gases
test gases representative of the extreme variations in characteristics of the gases for which the appliances have been designed

3.3.1.4
relative density
d
ratio of the masses of equal volumes of dry gas and dry air under the same conditions of temperature and pressure: 15 °C or 0 °C and 1 013,25 mbar

3.3.1.5
calorific value
quantity of heat produced by complete combustion at a constant pressure of 1 013,25 mbar, of a unit volume or mass of gas, the constituents of the combustible mixture being taken at reference

Note 1 to entry: A distinction is made between:

— the gross calorific value Hs: the water produced by combustion is assumed to be condensed;

— the net calorific value Hi: the water produced by combustion is assumed to be in the vapour state.

Note 2 to entry: The calorific value is expressed:

— either in megajoules per cubic metre ˜(MJ/m^3)™ of dry gas under the reference conditions;

— or in megajoules per kilogram (MJ/kg) of dry gas.

Note 3 to entry: In this European Standard only the gross calorific value is used.

3.3.1.6
Wobbe index
gross Wobbe index W_s; net Wobbe index W_i
ratio of the calorific value of a gas per unit volume and the square root of its relative density under the same reference conditions

Note 1 to entry: The Wobbe index is said to be gross or net according to whether the calorific value used is the gross or net calorific value.

Note 2 to entry: The Wobbe indices are expressed:

— either in megajoules per cubic metre (MJ/m^3) of dry gas under the reference conditions;

— or in megajoules per kilogram (MJ/kg) of dry gas.

3.3.1.7
theoretical air
volume of air necessary for the stoichiometric combustion of a unit volume of gas

3.3.2 Terms and definitions relating to pressures:

3.3.2.1
gas supply pressure
p
difference between the static pressure measured at the inlet connection of the appliance in operation and the atmospheric pressure

Note 1 to entry: The gas supply pressure is expressed in millibar (mbar): 1 mbar = 10^2 Pa.

3.3.2.2
test pressures
gas pressures which are used to verify the operational characteristics of appliances using combustible gases and which consist of normal and limit pressures

Note 1 to entry: The gas pressures used are expressed in millibars (mbar): 1 mbar = 10^2 Pa.

Note 2 to entry: The test pressures are given in EN 437:2003+A1:2009, Tables 5 and 6.

3.3.2.3
normal pressure
p_n
pressure under which the appliances operate in nominal conditions, when they are supplied with the corresponding reference gas