

SLOVENSKI STANDARD

SIST EN 30

prva izdaja
december 1997

**Plinski kuhalni aparati za gospodinjstvo
(prevzet EN 30:1979, EN 30/A2:1980 in EN 30/A3 mod. 2:1985 z
metodo platnice)**

Domestic cooking appliances burning gas

Appareils de cuisson domestiques utilisant les combustibles gazeux

Haushalt - Kochgeräte für gasförmige Brennstoffe

SIST EN 30:1997
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Deskriptorji: plinski aparati, kuhalne naprave, štedilniki, pečice, žari, kuhlalniki, specifikacije, varnostne naprave, preskušanje, lastnosti, zmogljivost, označevanje

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UVOD

Standard SIST EN 30, Plinski kuhalni aparati za gospodinjstvo, prva izdaja, 1997, ima status slovenskega standarda in je z metodo platnice prevzet evropski standard EN 30, Domestic cooking appliances burning gas, second edition, 1979-01-19, ki vključuje Dopolnilo 1:1977, skupaj z dopolniloma EN 30/A2:1980 in EN 30/A3 mod. 2:1985, v angleškem jeziku.

NACIONALNI PREDGOVOR

Evropski standard EN 30:1979 in dopolnili EN 30/A2:1980 in EN 30/A3 mod. 2:1985 je pripravil tehnični odbor Evropskega komiteja za standardizacijo CEN/TC 49 Gas Cooking Appliances (Plinski kuhalni aparati).

Odločitev za prevzem evropskega standarda EN 30 in dopolnil EN 30/A2:1980 in EN 30/A3 mod. 2:1985 po metodi platnice je dne 1996-09-25 sprejel tehnični odbor USM/TC PLN Plinske naprave za dom.

V delih, ki vsebujejo značilnosti posameznih držav, se standard dopolni s podatki oziroma parametri, ki veljajo v Sloveniji.

Ta slovenski standard je dne 1997-12-05 odobril direktor USM.

NACIONALNI DODATEK

Navedene tabele se dopolnijo s parametri, ki veljajo v Sloveniji:

Stran 63 - tabela 12: Kategorije aparatov, ki se prodajajo v posameznih državah

V Sloveniji se uporabljajo kategorije aparatov: I_{2H}, I₃, II_{2H3}.

Stran 66 - tabela 13: Vrste priključkov, ki se uporabljajo v posameznih državah

Za vse kategorije aparatov se uporabljajo navojni priključki, definirani v mednarodnih standardih ISO 7-1 in ISO 228-1.

Stran 67 - tabela 14: Velikost priključnih navojev, ki veljajo v posameznih državah

Pri kategoriji I₃ se dopuščajo vse velikosti, navedene v tabeli 14.

Pri drugih kategorijah se dopuščajo vse velikosti, navedene v tabeli 14, razen 1/4".

Stran 69 - tabela 17: Naprave za varovanje plamena

Pri odprtih gorilnikih je treba zagotoviti obvezno varovanje glavnega gorilnika.

Pri pokritih gorilnikih je treba zagotoviti obvezno varovanje glavnega gorilnika in varovalnega plamena.

Stran 71 - tabela 19: Običajni priključni tlaki za aparate

V Sloveniji se uporabljajo G20/20 mbar, G30/30 mbar in G31/30 mbar.

ZVEZI S STANDARDOM

S prevzemom tega evropskega standarda veljata naslednji zvezi:

SIST ISO 7-1:1995	Cevni navoji, pri katerih je tesnjenje izvedeno z navojem - 1. del: Mere, tolerance in označevanje
SIST ISO 228-1:1995	Cevni navoji, pri katerih tesnjenje ni izvedeno z navojem - 1. del: Mere, tolerance in označevanje

OSNOVA ZA IZDAJO STANDARDARDA

- Prevzem standarda EN 30:1979 in dopolnil EN 30/A2:1980 in EN 30/A3 mod. 2:1985

OPOMBI

- Povsod, kjer se v besedilu standarda uporablja izraz "evropski standard", v SIST EN 30:1997 to pomeni "slovenski standard".
- Uvod in nacionalni predgovor nista sestavni del standarda.

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Key words : Gas appliances, cooking devices, cookers, ovens, grills, hot-plates, specifications, safety devices, tests, performance tests, marking.

English version

DOMESTIC COOKING APPLIANCES

BURNING GAS

Appareils de cuisson domestiques
utilisant les combustibles gazeux

Haushalt-Kochgeräte
für gasförmige Brennstoffe

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This European Standard was accepted by CEN on 1979-01-19. The CEN Members are bound to adhere to the CEN Internal Regulations which specify under which conditions this European Standard has to be given, without any alteration, the status of a national standard.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Central Secretariat or to any CEN Members.

This European Standard is established by CEN in three official versions (English, French, German). A translation made by another Member under its own responsibility, in its own language, and notified to CEN, has the same status.

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CEN

EUROPEAN COMMITTEE FOR STANDARDIZATION
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: 2, rue Bréderode, B-1000 Bruxelles

BRIEF HISTORY

The European Standard EN 30 has been produced by the technical committee CEN/TC 49 "Gas Cooking Appliances".

A first edition of this standard was published on 76-09-25.

This second edition, including Amendment 1 of March 1977, was adopted by CEN on 1979-01-19 following its acceptance by the following member countries :
Belgium, Denmark, France, Germany, Portugal, Spain, United Kingdom.

It is subject to subsequent amendments or additions resulting from the studies of the technical committee CEN/TC 49, and ratified in accordance with the procedures for revision laid down in the framework for adaptation to technical development.

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1. GENERAL

1.1. SCOPE

This standard defines the construction and performance characteristics, the test methods and the marking of domestic cooking appliances burning gas, referred to in the body of the text as appliances.

1.2. FIELD OF APPLICATION

This standard covers the following types of domestic appliance, as defined in clause 1.3 :-

- independent hotplates
- table cookers
- ovens
- grills
- cookers

The requirements apply to these appliances or their component parts whether or not the latter are independent or incorporated into a single appliance, even if the other components of the appliance do not burn gas (e.g. combined gas-coal or gas-electric cookers).

This standard does not apply to appliances intended to be built-in.

An appliance supplied with third family gas directly from a cylinder at a pressure greater than those defined in clause 4.1.2. is outside the field of application of this standard.

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When a European standard is adopted concerning one or several items of auxiliary equipment or mechanical sealing joints defined in clause 1.3 and fitted as part of appliances covered by the present standard, this equipment must conform to the requirements of the corresponding European standard. Prior to the adoption of these European standards the national standards covering these items of auxiliary equipment and these mechanical sealing joints may be applied. However a member of CEN cannot insist on conformity to its national standards for items of auxiliary equipment or mechanical sealing joints when they have already been recognised as conforming to the national standards of another member of CEN.

1.3. TERMINOLOGY

Conversion :

An operation carried out by a specialist at the time of a change of gas

Appliance incorporating a cylinder :

An appliance (cooker) working on liquified petroleum gas (LPG) which includes a compartment for the cylinder

Built-in appliance :

An appliance intended for installation in a kitchen cabinet or unit, in a housing located in a wall, or under similar conditions.

Such an appliance does not necessarily have a casing on all sides.

Domestic Cooking Appliances

Appliances intended to be used by private individuals. This is evident from the construction, the instructions for use and maintenance and the technical instructions for installation and adjustment.

AUXILIARY EQUIPMENT

The auxiliary equipment means :

- taps and cocks
- gas governors
- flame failure devices
- thermostats
- multifunctional controls
- automatic shut-off valves

Yellow tipping:

Phenomenon characterised by the appearance of yellow colouring at the top of the blue cone of an aerated flame.

Locking of an adjuster :

If an adjuster, after having been adjusted by the manufacturer or installer, is immobilised in this position by an effective means (screw, plug etc.), it is said to be locked in this position.

Burner :

A component which allows the gas to burn.

It may be one of two types :

- aerated burner : a burner in which part of the air for combustion, termed primary air, is mixed with gas before the burner port: the remainder of the air drawn in at the burner port is termed secondary air.

It generally consists of:-

- a body formed by a venturi and a mixing tube
- a head or cap either integral with the burner or removable.
- a non-aerated burner : a burner in which the air for combustion is entrained entirely at the burner outlet.

Covered burner :

A burner where the pan being heated is screened from direct flame contact by the interposition of a flat surface on which it rests.

Uncovered burner :

A burner where the pan being heated is in direct contact with the flames.

Oven and grill furniture :

Accessories supplied with the appliance for cooking in the oven and grill. These are, for example :

- the grid to support food which is cooked in the oven or under the grill and to keep the food from contact with cooking juices. It also serves as a shelf for supporting dishes in the oven.
- the meat tin used to collect juices from cooking and to hold food cooked in the oven.
- the baking sheet to hold small pastries.

Shut down lid :

A lid intended to be shut down over the hotplate.

Cooker :

A cooking appliance resting directly on the floor, comprising :

- A hotplate including one or more burners
- One or more ovens, with or without a thermostat
- Possibly a grill, which can be of the contact or radiant type.

Heat input :

The product of the volume or mass rate and the calorific value of the gas (brought to the same reference conditions). It is expressed in kW.

Nominal heat input of burner :

The value of the heat input of the burner, as declared by the manufacturer.

Volume or mass rate :

Volume rate : the volume of gas passed in unit time. This is expressed in m³/h or in litres/h (dm³/h).

Mass rate : the mass of gas passed in unit time. This is expressed in kg/h or g/h.

Flame lift :

Phenomenon characterised by the partial or total movement of the base of the flame away from the burner port.

Relative density (relative to air) : symbol : d

The ratio of the mass of a volume of dry gas to an equal volume of air under the same temperature and pressure conditions.

Restrictor :

A device with a calibrated orifice which is placed in the path of the gas flow between the inlet connection of the appliance and a burner to create a pressure loss and thus reduce the gas pressure at the burner to a predetermined value.

Ignition device :

A device to ignite one or more burners directly or indirectly, for instance through a flash tube.

It may be :

- either electric (resistance, spark
- or thermal (pilot), etc

Safety device : Flame failure device:

A device including a sensing element which causes the gas supply to a burner to be opened or closed according to the presence or absence of the flame which activates the sensing element.

Oven :

A closed compartment for cooking roasts, pastries, etc

Shelf supports/runners :

Supports in the side walls of an oven to support the oven furniture.

Pan support :

A support placed above a hotplate burner, which keeps the pan being heated at a set distance from the burner.

Grill :

An appliance for dry cooking or grilling at a high temperature, either by radiation or direct contact.

Oven Viewing Panel

A glass area allowing the inside of the oven to be seen. The oven viewing panel also includes a zone 1cm wide around the transparent part.

Wobbe number :

This is given by the formula :

$$\frac{H}{\sqrt{d}}$$

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Where H is the gross or net CV of a gas expressed in MJ/m³ ; and d is its relative density.

Injector :

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A component part which admits the gas into an aerated burner. There are two types of injector

- calibrated injector : where the section of the outlet orifice is fixed.
- adjustable injector : where the section of the outlet orifice is variable.

Sound mechanical joint :

A connection device assuring soundness in an assembly made up of several parts, generally of metal.

It may be :

- a conical joint
- an O ring joint
- a flat faced joint

Tap handle :

A manually operated component used to open, partially open, or close a tap.

Putting a control out of service :

A control (of temperature, pressure, etc.) is said to be put out of service if it is put out of action and sealed in this position. The appliance then functions as if this device had been removed.

Primary air adjuster :

A device allowing the aeration of burner to be set at a predetermined value according to the supply conditions. The operation of changing the setting of this device is termed the "adjustment of primary air".

Gas rate adjuster :

A device allowing the gas rate to a burner to be set at a predetermined value according to the supply conditions. It often consists of a screw, termed a "throttle screw" or an "adjustment screw". The operation of changing the setting of this device is termed the "adjustment of the gas rate".

Oven drop door :

An oven door with a horizontal axis of rotation.

Net calorific value :

The quantity of heat produced by combustion, at constant pressure of unit volume or mass of the gas under consideration, the products of combustion being brought to a temperature of 0 °C, the water produced by combustion being assumed to be retained in the vapour state and the air necessary for combustion being considered as previously dry at 0 °C. It is expressed in MJ referred either to 1 m³ of the dry gas measured at 0 °C at a pressure of 1.013 bar or to 1 kg of dry gas.

Gross calorific value :

The quantity of heat produced by the combustion, at constant pressure of unit volume or mass of the considered gas, the water produced by the combustion being condensed.

It is expressed in MJ referred either to 1 m³ of dry gas measured at 0 °C at a pressure of 1.013 bar or to 1 kg of dry gas.

Gas supply pressure :

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

Table cooker :

A cooking appliance resting on a raised support or stand. It consists of

- a hotplate comprising one or more burners
- an oven
- possibly a radiant or contact grill

Governor :

A device which provides a sensibly constant downstream pressure when the upstream pressure is variable.

Light back :

Phenomenon characterised by the return of the flame inside the body of the burner.

Tap :

A device to isolate the gas supply to the various burners and to adjust their rate during use.

Sealing of an adjuster :

If the locking of an adjuster is achieved by a means such that any attempt to change the adjustment makes the interference with the adjuster apparent (for example, breaking of a sealing material), the adjuster is said to be sealed in the adjusted position.

Soft soldering :

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

Stability of flames :

The flames are stable at the burner ports when the phenomena of flame lift or light back do not occur.

Independent hotplate :

A cooking appliance consisting of a hotplate which may comprise one or more burners.

Hotplate :

Part of a cooking appliance comprising one or more covered or uncovered burners and designed to support cooking vessels.

Primary aeration rate :

The ratio $\frac{\text{volume of primary air}}{\text{volume of theoretical air}}$

Primary air : (standards.iteh.ai)

The volume of air entrained at the injector by unit volume of gas.

Theoretical air : <https://standards.iteh.ai/catalog/standards/sist/31a0ae73-61a4-4b07-bc32-b52fe13bc5a7/sist-en-30-1997>

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

Thermostat :

A device to maintain automatically a selected constant temperature. It includes a graduated scale for the selection of the temperature depending on the cooking being undertaken.

Float rail :

The piping which distributes gas to the various burners.

Pilot :

Small burner which ensures the ignition of a main burner by means of a flame.

Permanent pilot

Pilot which needs manual intervention independent of the manual or automatic operation of the main burner in order to be shut off.

1.4. CLASSIFICATION1.4.1. CLASSIFICATION OF GASES

Gases likely to be used are classified in three families according to the value of their Wobbe number.

- 1st family (manufactured gases of groups a and b)
- Wobbe number between 23.9 and 31.4 MJ/m³ gross CV
21.5 and 28.7 MJ/m³ net CV