



SLOVENSKI STANDARD

oSIST prEN 30-1-2:2021

01-oktober-2021

Plinski kuhalni aparati za gospodinjstvo - Varnost - 1-2. del: Aparati z ventilatorskimi pečicami in/ali žari

Domestic cooking appliances burning gas - Safety - Part 1-2: Appliances having forced-convection ovens

Haushalt-Kochgeräte für gasförmige Brennstoffe - Sicherheit - Teil 1-2: Geräte mit Umluft-Backöfen und/oder Strahlungsgrilleinrichtungen

Appareils de cuisson domestiques utilisant les combustibles gazeux - Sécurité - Partie 1-2: Appareils comportant des fours et/ou des grilloirs à convection forcée

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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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EUROPEAN STANDARD
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Domestic cooking appliances burning gas - Safety - Part 1- 2: Appliances having forced-convection ovens

Appareils de cuisson domestiques utilisant les combustibles gazeux - Sécurité - Partie 1-2: Appareils comportant des fours et/ou des grilloirs à convection forcée

Haushalt-Kochgeräte für gasförmige Brennstoffe - Sicherheit - Teil 1-2: Geräte mit Umluft-Backöfen und/oder Strahlungsgrilleinrichtungen

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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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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prEN 30-1-2:2021 (E)**European foreword**

This document (prEN 30-1-2:2021) 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 30-1-2:1999.

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

For relationship with EU Directive(s) / Regulation(s), see informative Annex ZA, which is an integral part of this document.

This standard is intended to be used together with FprEN 30-1-1:2021 on which the requirements and methods of test for appliances having forced-convection ovens and/or grills are based. In particular, this standard identifies the requirements and methods of test specific to these appliances, which are in addition to, or replace, those given in FprEN 30-1-1:2021.

Where a particular subclause of FprEN 30-1-1:2021 is not mentioned in this part 2, the subclause of FprEN 30-1-1: 2021 applies as far as is reasonable. Where this European Standard states "addition", "modification" or "replacement", the relevant text of EN 203-1:2021 shall be adapted accordingly.

This part is also intended to be used together with any other part of EN 30-1-x related to "Safety", whenever the appliances covered by this other part include a forced convection oven and/or grill.

Other European Standards covering domestic cooking appliances burning gas are as follows:

- EN 30-1-1: Domestic cooking appliances burning gas — Part 1-1: Safety — General,
- EN 30-1-3: Domestic cooking appliances burning gas — Part 1-3: Safety — Appliances having a glass ceramic hob,
- 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 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.

The main change since the last edition are as follows (minor changes are not listed):

- adaptation to EN 30-1-1:2021 and to its editorial contents.

1 Scope

This document specifies the special constructional and operational characteristics, as well as the requirements and methods of test for safety and marking, for domestic cooking appliances having forced-convection ovens and /or grills using combustible gases, as defined in FprEN 30-1-1:2021.

Unless specifically excluded, this document applies to appliances or their component parts, whether the component parts are independent or incorporated as part of the appliance, even if the other heating components use electrical energy (for example combined gas-electric cookers).

This document includes requirements covering the electrical safety of equipment incorporated in the appliance that are associated with the use of gas. It does not include requirements covering the electric safety of electrically-heated components or their associated equipment¹.

This document 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 do not comply with the constructional requirements of FprEN 30-1-1:2021, 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;
- appliances equipped with a burner that is periodically ignited and extinguished under the control of an automatic on/off device;
- appliances equipped with a burner having a fan for the supply of combustion air or for the evacuation of the products of combustion;
- appliances supplied at pressures greater than those defined in FprEN 30-1-1:2021, 7.1.2;
- 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;
- appliances equipped with a compartment in which a burner and an electric heating element can function simultaneously;
- appliances having one or more burners that are capable of remote operation (type 1 or type 2), unless the burner(s) concerned are thermostatically controlled oven burners of time-controlled ovens that are designed for a delayed start without the user being present.

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

This document only covers type testing.

¹ Refer to the electrical safety rules.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

FprEN 30-1-1: — ² *Domestic cooking appliances burning gas — Part 1-1: Safety — General*

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)*

EN 60335-2-6:2015/A1:2020, *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/A1:2018)*

EN 60335-2-6:2015/A11:2020, *Household and similar electrical appliances — Safety — Part 2-6: Particular requirements for stationary cooking ranges, hobs, ovens and similar appliances*

3 Terms and definitions

For the purposes of this document, the definitions given in FprEN 30-1-1:2021, Clause 3 and the following apply.

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ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <https://www.iso.org/obp>

— IEC Electropedia: available at <http://www.electropedia.org/>
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3.101

conventional oven

closed compartment for cooking roasts, pastries, etc., in which the transmission of heat is carried out by natural convection

3.102

conventional grill

appliance or part of an appliance that allows cooking by radiant heat from a surface which is raised to a high temperature and for which a fan is not used for the transmission of heat

3.103

forced-convection oven or grill

oven or grill equipped with a fan intended to assist the transmission of heat by creating a forced circulation of air or products of combustion; this fan is not intended to supply combustion air

3.104

dual purpose oven or grill

forced-convection oven or grill capable of being used as a conventional oven or grill

² Under preparation. Stage at time of publication: FprEN 30-1-1:2021.

3.105

normal conditions of convection

conditions of convection that correspond to the operation of a forced-convection oven or grill that can be used with or without the fan in operation in accordance with the manufacturer's instructions

3.106

abnormal conditions of convection

abnormal conditions that relate to operating conditions of the appliance, if this is possible, in which the burner or burners that are not intended to function without the convection fan are capable of being put into operation when the convection fan has failed

4 Classification

The classification of FprEN 30-1-1:2021, Clause 4 shall be applied.

5 Constructional requirements

5.1 General

The appliance shall comply with the requirements of FprEN 30-1-1:2021, Clause 5, any verifications in the form of tests being carried out in accordance with Clause 7 of this European Standard rather than the corresponding clauses of FprEN 30-1-1:2021.

The appliance shall also satisfy the following requirements.

5.3 Convection fan

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Moving parts of the fan of forced-convection ovens and grills shall be arranged or protected in such a way that in normal use appropriate protection of persons against accidents is assured.

The removal of any parts allowing access to moving parts of the fan shall not be possible without tools unless the procedure employed to reach these moving parts causes the fan to stop automatically, for example by shutting off the electrical supply, or by mechanical locking of the rotor.

Under the conditions of EN 60335-2-6:2015³⁾, 20.2, after application of a force on the parts preventing access to moving parts of the fan, any deformations or alterations of position caused shall not allow the moving parts of the fan to be touched with the test finger.

6 Operational requirements

6.1 General

Unless specifically modified hereafter, the appliance shall comply with the requirements of FprEN 30-1-1:2021, Clause 6 when it is operating under the normal conditions of convection, any verifications in the form of tests being carried out in accordance with Clause 7 of this European Standard rather than those of the corresponding clauses of FprEN 30-1-1:2021.

The appliance shall also satisfy the additional requirements in 6.5.

³⁾ document impacted by A1:2020 and A11:2020.

prEN 30-1-2:2021 (E)**6.1.2.1 Obtaining the nominal heat input**

FprEN 30-1-1:2021, 6.1.2.1 applies with the addition of the following:

For dual purpose ovens or grills, the it is possible to declare:

- either a single nominal heat input, common to both modes of operation with or without fan;
- or two nominal heat inputs, corresponding to each mode of operation with or without fan.

6.1.9 Failure of the cooling fan or thermostat

For forced-convection ovens or grills, the requirements of FprEN 30-1-1:2021, 6.1.9 apply under the normal conditions of convection.

6.3 Special requirements for ovens and grills

FprEN 30-1-1:2021, 6.3 shall apply, with the following modification:

The second paragraphs of FprEN 30-1-1:2021, 6.3.1.1 and 6.3.1.2 are replaced by the following text:

After ignition under these conditions and under the normal conditions of convection, the flames shall be stable and quiet. A slight tendency to flame lift is permitted on ignition but the flames shall be stable 120 s after ignition.

6.4 Additional requirements for appliances having forced-convection ovens and/or grills**6.4.1 Abnormal conditions of convection** oSIST prEN 30-1-2:2021

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6.4.1.1 Ignition, cross-lighting, flame stability

If the design of the appliance is such that ignition of a forced-convection oven or grill is possible under abnormal conditions of convection, the oven or grill is lit in still air under the conditions of test in 7.3.4.1.2. It shall be verified that ignition and cross lighting are carried out smoothly within 5 s, starting from the moment when the control handle is in the full-on position or in the ignition position, if this exists.

After ignition under these abnormal conditions of convection, the flames shall be stable and quiet. A slight tendency to flame lift is permitted on ignition but the flames shall be stable 120 s after ignition.

6.4.1.2 Combustion

For forced-convection ovens and/or grills that are not intended to be used without the fan and which are not equipped with a device interrupting the gas supply in the event of fan failure, it shall be verified under the conditions of 7.3.4.1.3 that the volume concentration of CO in the dry, air-free products of combustion does not exceed 0,20 % after 15 min before operation at the full-on rate.

6.4.1.3 Safety device in the event of failure of the convection fan

For forced-convection ovens and/or grills that are not intended to be used without the fan and which are equipped with a device for interrupting the gas supply in the event of convection fan failure, it is verified under the condition of 7.3.4.1.1 that operation of the burner, or burners, which are only intended to operate with the fan, is not possible when the fan is out of action.

6.4.2 Stalled convection fan

For an appliance having one or more forced convection ovens and/or grills, the temperature of auxiliary equipment that can be affected by overheating of the motor in the event of stalling the convection fan shall not exceed the temperature specified by the manufacturer under the conditions defined in 7.3.4.2.

7 Test methods

7.1 General

The requirements in 7.1.1. to 7.1.7 modify the general conditions of tests given in FprEN 30-1-1:2021, 7.1.1 to 7.1.7 in order that they are suitable for appliances having forced-convection ovens and/or grills. These general conditions are to be applied even when references are made to the methods of test given in FprEN 30-1-1:2021.

7.1.1 Reference and test gases

7.1.1.1 Characteristics of the test gases

FprEN 30-1-1:2021, 7.1.1.1 shall apply.

7.1.1.2 Conditions for preparation of test gases

FprEN 30-1-1:2021, 7.1.1.2 shall apply.

7.1.2 Test pressures

FprEN 30-1-1:2021, 7.1.2 shall apply.

7.1.3 Test procedures

FprEN 30-1-1:2021, 7.1.3, and its sub-clauses, shall apply with the following addition to 7.1.3.2.3:

For dual purpose ovens or grills,

- if a single nominal heat input is declared, the initial adjustment of the burner is carried out with the fan in operation and this adjustment is retained for the tests with the fan stopped;
- if two nominal heat inputs are declared, the tests shall be carried out with the initial adjustment corresponding to the conditions of operation of the convection fan.

7.1.4 Pans and oven and grill accessories

7.1.4.1 Individual tests

FprEN 30-1-1:2021, 7.1.4 shall apply.