

### SLOVENSKI STANDARD SIST EN 203-2-2:2022

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Nadomešča:

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Plinske naprave za gostinstvo - 2-2. del: Posebne zahteve - Pečice

Gas heated catering equipment - Part 2-2: Specific requirements - Ovens

Großküchengeräte für gasförmige Brennstoffe - Teil 2-2: Spezifische Anforderungen - Backöfen

Appareils de cuisson professionnelle utilisant les combustibles gazeux - Partie 2-2: Exigences particulières - Fourstandards.iteh.ai)

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pečice in podobni aparati

Cooking ranges, working tables, ovens and similar

appliances

SIST EN 203-2-2:2022

en,fr,de

**SIST EN 203-2-2:2022** 

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EUROPEAN STANDARD NORME EUROPÉENNE

**EUROPÄISCHE NORM** 

EN 203-2-2

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#### **English Version**

# Gas heated catering equipment - Part 2-2: Specific requirements - Ovens

Appareils de cuisson professionnelle utilisant les combustibles gazeux - Partie 2-2: Exigences particulières - Fours Großküchengeräte für gasförmige Brennstoffe - Teil 2-2: Spezifische Anforderungen - Öfen

This European Standard was approved by CEN on 3 October 2021.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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#### **European foreword**

This document (EN 203-2-2:2021) has been prepared by Technical Committee CEN/TC 106 "Large kitchen appliances using gaseous fuels", the secretariat of which is held by AFNOR.

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 June 2022, and conflicting national standards shall be withdrawn at the latest by June 2022.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 203-2-2:2005.

The technical changes in comparison to the previous edition are:

- alignment with EN 203-1:2021,
- clarification of the scope according to EN 203-1:2021,
- clarification of the definitions, especially for bakery ovens, cooking chamber, usable volume of a cooking chamber and isolating device.
- update of the paragraph on stability and mechanical safety (5.3.2),
- addition of a performance requirement for shut off device for multi-function ovens with direct heating (6.5.101), (Standards.iteh.al)
- clarification of the functioning of a sequential burner (6.7.2),
- updating of requirement of rational use of energy in 6.9ds/sist/3cfca699de83-4ea0-ad84-5f2ef5fef34d/sist-en-203-2-2-2022
- clarification of the test on stability and mechanical safety for moving parts (7.8.1),
- clarification of the test for rational use of energy (7.10) for ovens and bakery ovens,
- updating of the calculation of rational use of energy index (7.10.103),
- updating of Clause 8 on marking and instructions.

This document is used in conjunction with EN 203-1:2021 "Gas heated catering equipment – Part 1: General safety requirements". This document specifies particular requirements for ovens.

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

Subclauses, Figures and Tables which are additional to those in EN 203-1:2021 are numbered starting with 101.

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.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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#### 1 Scope

*The scope of EN 203-1:2021 applies, with the following addition and modification of the 3rd paragraph:* 

This document applies to catering, bakery and pizza ovens.

This document applies to gas heated natural and forced convection ovens, multi-function ovens and atmospheric steaming ovens.

This document does not cover appliances which are specifically designed for use in industrial processes on industrial premises nor appliances intended to be operated with the door open.

#### 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

EN 203-1:2021, Gas heated catering equipment - Part 1: General safety requirements

EN 60335-1:2012<sup>1)</sup>, Household and similar electrical appliances - Safety - Part 1: General requirements

#### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 203-1:2021 and the following apply.

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

- ISO Online browsing platform: available at <a href="https://www.iso.org/obp">https://www.iso.org/obp</a>
- (Standards.iteh.a)
  IEC Electropedia: available at <a href="https://www.electropedia.org/">https://www.electropedia.org/</a>

Clause 3 of EN 203-1:2021 applies with the following additions:

https://standards.iteh.ai/catalog/standards/sist/3cfca699-3.101 Terminology referring to type of appliances de83-4ca0-ad84-3f2cf5fef34d/sist-en-203-2-2-2022

#### 3.101.1

#### natural convection oven

appliance in which food is cooked in a chamber by natural convection

#### 3.101.2

#### forced convection oven

appliance equipped with a cooking chamber in which hot air is circulated by means of an electromechanical device

#### 3.101.3

#### multi-function oven

appliance having several modes of cooking:

natural convection mode: heating of the cooking chamber by natural convection;

<sup>1)</sup> As impacted by EN 60335-1:2012/AC:2014, EN 60335-1:2012/A11:2014, EN 60335-1:2012/A13:2017, EN 60335-1:2012/A1:2019, EN 60335-1:2012/A2:2019 and EN 60335-1:2012/A14:2019.

- hot air mode: heating of the cooking chamber by forced convection;
- steam mode: a steam generator produces steam which is injected into the cooking chamber. The oven can be used as a steam cooker without pressure;
- mixed mode: combination of the hot-air and steam modes; the hot air is humidified by the steam. The steam injection can be continuous or intermittent by selection of the operator.

Note 1 to entry: Certain ovens do not have a steam generator. Steam is produced by the injection of water.

#### 3.101.4

#### bakery oven

oven designed exclusively for cooking bakery products (e.g. bread, cake, pastry, pizza, Danish product,...)

#### 3.101.5

#### direct heating

food is directly heated by the products of combustion

#### 3.101.6

#### indirect heating

food is not directly heated by the products of combustion

#### 3.101.7

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#### steam generator

apparatus providing the water vapour used to cook the food

#### 3.101.8

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cooking chamber

interior of the oven in which food products are heated or cooked

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Note 1 to entry: More than one cooking chamber may be present and ards/sist/3cfca699-

de83-4ea0-ad84-5f2ef5fef34d/sist-en-203-2-2-2022

#### 3.101.9

#### usable volume of a cooking chamber

useful shelf area (shelf or bottom of the chamber) multiplied by the height of the accessible opening

#### 3.101.10

#### usable volume of an oven

V

sum of the usable volumes of the cooking chamber(s) of the oven

#### 3.101.11

#### centre of the cooking chamber

geometric centre of the usable volume of the cooking chamber of the oven

#### 3.101.12

#### shelf support

support designed to receive the cooking shelves and cooking plates

#### 3.101.13

#### trolley

apparatus allowing the pre-loading of several shelves outside the appliance prior to introduction in the oven

#### 3.101.14

#### oven accessory

accessory used for cooking in the oven, supplied with the appliance or as an option (e.g. cooking shelf, pastry trays, roasting pans, perforated pans, baskets)

#### 3.101.15

#### isolating device

device permitting the isolation of components of the gas circuit of the appliance (combustion air fan, pressure switch, multifunction control etc.) of multi-function ovens with direct heating

Note 1 to entry: This device prevents ingress of steam in the gas circuit when the oven is used in the vapour mode.

Note 2 to entry: In the hot air or mixed mode, the isolating device is in the open position to keep clear the injection of the air gas mixture to the combustion head.

#### 4 Classification

Clause 4 of EN 203-1:2021 applies.

#### 5 Constructional requirements

#### 5.1 General

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Shall be according to EN 203-1:2021, 5.1 with the following additions:

#### 5.1.6.101 Evacuation of combustion products for multi-function ovens

Combined combustion products circuits shall be constructed in such a way as to ensure that the burner of the steam generator and the burner for hot air mode shall not influence each other in any way.

The requirements of EN 203-1:2021 67 shall be fulfilled for separate and combined operations of the burners. https://standards.iteh.ai/catalog/standards/sist/3cfca699-

In the case of multi-function ovens with direct heating if a closing/opening device of the combustion products circuit exists, its opening shall be controlled and maintained when in hot air mode and mixed mode. A control device shall be used to ensure that the burner cannot be operated if the evacuation circuit of the products of combustion is closed.

#### 5.2 Particular requirements for components in the gas circuit

#### 5.2.3 Auxiliary equipment

Shall be according to EN 203-1:2021, 5.2.3 with the following addition:

#### 5.2.3.101 Isolating device for multi-function ovens with direct heating

An isolating device shall be used in order to avoid any contact of steam with the operating and safety controls of the gas circuit such as gas control, multifunction controls, pressure switches etc.

The correct operation of the isolating device is checked according to 7.8.102.

#### 5.3 Particular requirements

#### 5.3.2 Stability and mechanical safety

*Shall be according to EN 203-1:2021, 5.3.2 with the following addition:* 

Appliances other than those intended to be fixed to the floor shall not tilt when the door(s) is(are) opened and subjected to a load according to 7.8.1.102.

The forced convection burners, in hot air mode, shall not operate unless the oven door(s) is(are) closed.

The air circulation fan shall not operate unless the door(s) is(are) closed.

If the oven foresees a cooling process with an open door, it shall not be possible to touch the moving parts, in the test conditions of 7.8.1.

Movable parts (e.g. lever, rotating oven bottom, rotating trolley) accessible by the user, shall be arranged or enclosed in such way to ensure an appropriate protection against the risks of injuries in normal use, included cleaning.

The protection devices shall not be removable unless an appropriate lock out is installed to prevent the displacement of the movable part when the protection device is removed.

The compliance with the requirement is checked by inspection.

#### 6 Performance requirements

Clause 6 of EN 203-1:2021 applies with the following additions:

#### 6.3 Safety of operation

Shall be according to EN 203-1:2021, 6.3 with the following addition:

#### 6.3.101 Sequence of operation

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The operation of the temperature regulator shall not have priority over the safety devices, (e.g. safety device of door, flame failure device, detector of failure of a fan in a combustion circuit).

#### 6.5 Auxiliary equipment

Shall be according to EN 203-1:2021, 6.5 with the following addition:

#### 6.5.101 Shut off device for multi-function ovens with direct heating-2-2-2022

The operation of the shut off device shall not be influenced by steam under the condition of 7.8.102.

#### 6.7 Combustion

#### 6.7.2 Special conditions

Shall be according to EN 203-1:2021, 6.7.2 with the following addition:

The functioning of a sequential burner shall not cause a content of CO in the combustion products exceeding 0,2 % in the test condition N°1 of 7.6.101.

For multi-function ovens with direct heating, the CO rate contained in the products of combustion in the hot air mode shall not exceed 0,2 % when the maximum quantity of steam is injected into the cooking chamber (maximum dosage) in the test condition N°2 of 7.6.101.

For forced convection and direct heating ovens, when operating in hot air mode, the functioning of the burner shall be such that the percentage of CO in the combustion products shall be less than 0.2% in the test condition  $N^{\circ}3$  of 7.6.101.

#### 6.9 Rational use of energy

*Shall be according to EN 203-1:2021, 6.9 with the following addition:*