

საქართველოს სტანდარტი

აირზე მომუშავე კვების მოწყობილობა-ნაწილი 1: უსაფრთხოების ზოგადი წესები

საქართველოს სტანდარტებისა და მეტროლოგიის
ეროვნული სააგენტო
თბილისი

სსტ ენ 203-1 : 2014/2015

საინფორმაციო მონაცემები

1 დამტკიცებულია და შემოღებულია სამოქმედოდ საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს 2015 წლის 27 ოქტომბრის № 69 და 2015 წლის 09 ივლისის № 46 განკარგულებებით

2 მიღებულია გარეკანის თარგმნის მეთოდით სტანდარტიზაციის ევროპული კომიტეტის სტანდარტი ენ 203-1 : 2014 „აირზე მომუშავე კვების მოწყობილობა-ნაწილი 1: უსაფრთხოების ზოგადი წესები“

3 პირველად

4 რეგისტრირებულია საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს რეესტრში: 2015 წლის 27 ოქტომბერი №268-1.3-8014

აკრძალულია ამ სტანდარტის გადაცემა მესამე პირებისათვის ან/და მისი სხვა ფორმით გავრცელება

საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.

English Version

Gas heated catering equipment - Part 1: General safety rules

Appareils de cuisine professionnelle utilisant les combustibles gazeux - Partie 1: Règles générales de sécurité

Großküchengeräte für gasförmige Brennstoffe - Teil 1: Allgemeine Sicherheitsanforderungen

This European Standard was approved by CEN on 13 December 2013.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....6

1 Scope8

2 Normative references8

3 Terms and definitions9

3.1 Terminology referring to gases and pressures9

3.2 General terminology referring to appliance design 10

3.3 Terminology referring to appliance operation 15

4 Classification..... 17

5 Constructional requirements..... 19

5.1 General..... 19

5.1.1 Conversion to different gases 19

5.1.2 Materials and methods of construction 20

5.1.3 Use, cleaning and maintenance 21

5.1.4 Gas connections 21

5.1.5 Soundness..... 21

5.1.6 Supply of combustion air and evacuation of combustion products 22

5.1.7 Flame visibility 24

5.1.8 Electrical safety..... 24

5.1.9 Construction requirements for gas cylinder compartment..... 24

5.2 Particular requirements for components in the gas circuit 25

5.2.1 General..... 25

5.2.2 Gas rate control and shut-off device 25

5.2.3 Auxiliary equipment 27

5.2.4 Burners 29

5.2.5 Gas rate adjusters..... 29

5.3 Particular requirements 29

5.3.1 Food spillage..... 29

5.3.2 Stability and mechanical safety 30

5.3.3 Safety from fire risk 30

5.3.4 Appliances connected to a potable water supply 30

6 Performance requirements 30

6.1 Soundness..... 30

6.1.1 Soundness of the gas circuit..... 30

6.1.2 Soundness of combustion product circuit of type B appliances 30

6.2 Obtaining the gas rate 31

6.2.1 Nominal heat input (Q_n)..... 31

6.2.2 Full calorific rate 31

6.2.3 Reduced heat input..... 31

6.2.4 Ignition burner heat input 31

6.3 Safety of operation 31

6.3.1 Burners 31

6.3.2 Temperature limits..... 32

6.3.3 Ignition – cross-lighting - flame stability..... 33

6.3.4 Combustion products safety devices for type B_{11BS} appliances 34

6.3.5 Pre-purge 34

6.4 Influence of burners on each other..... 34

6.5 Auxiliary equipment 35

6.5.1 Flame shut off device 35

საინფორმაციო ნაწილი. სრული ტექსტის სახსრავად შეიძლება სტანდარტი.

6.5.2	Ignition device	36
6.6	Air proving device	36
6.6.1	General	36
6.6.2	Supervision of the combustion air or combustion products rate	36
6.6.3	Supervision of the combustion air pressure or combustion products pressure	36
6.6.4	Air/gas ratio controls	37
6.7	Combustion.....	37
6.7.1	All appliances (in calm air)	37
6.7.2	Special conditions	37
6.8	Particular requirements	37
6.8.1	Stability and mechanical safety	37
6.8.2	Pressurized parts	37
6.8.3	Lack of heat-bearing fluid.....	38
6.9	Auxiliary energy.....	38
6.9.1	General	38
6.9.2	Electrical energy fluctuation	38
6.9.3	Other auxiliary energy.....	38
6.10	Rational use of energy	38
6.11	Operating requirements - Temperature of the LPG cylinder and its compartment.....	38
6.11.1	Temperature of the walls of the compartment	38
6.11.2	Temperature of the LPG cylinder.....	39
7	Test conditions	39
7.1	General	39
7.1.1	Characteristics of the test gases	39
7.1.2	Requirements for making up test gases	39
7.1.3	Test room	39
7.1.4	Preparation of the appliance	39
7.1.5	Practical method of test.....	40
7.1.6	Test pressures	41
7.1.7	Carrying out the tests	41
7.2	Soundness	41
7.2.1	Soundness of the gas circuit	41
7.2.2	Soundness of the combustion circuit and correct evacuation of the combustion products for type B appliances	42
7.3	Obtaining gas rates	43
7.3.1	General	43
7.3.2	Nominal heat input	43
7.3.3	Full rate.....	45
7.3.4	Reduced rate.....	45
7.4	Operational safety	45
7.4.1	Burners	45
7.4.2	Limit temperatures	46
7.4.3	Ignition - cross- lighting - flame stability	47
7.5	Auxiliary equipment	51
7.5.1	Flame shut off device.....	51
7.5.2	Ignition device	53
7.6	Combustion.....	53
7.6.1	General	53
7.6.2	Tests carried out under normal conditions	54
7.6.3	Specific test for type B appliances	55
7.6.4	Test with sooting limit gas	56
7.7	Air-proving device	56
7.7.1	General	56
7.7.2	Supervision of the combustion air or the combustion products rate	56
7.7.3	Supervision of the combustion air or the combustion products pressure	57
7.8	Special tests.....	57

7.8.1	Stability and mechanical safety	57
7.8.2	Pressurized parts	57
7.8.3	Lack of heat bearing fluid	58
7.9	Test method - Overheating of the LPG cylinder and its compartment	58
8	Designation	58
9	Marking and instructions	59
9.1	General.....	59
9.2	Marking on the appliance.....	59
9.2.1	Data plates and labels	59
9.2.2	Other marking on the appliance.....	59
9.3	Instructions	60
9.3.1	General.....	60
9.3.2	Instructions for use and maintenance.....	60
9.3.3	Instructions for installation and adjustment.....	60
9.3.4	Instructions for conversion to different gases	62
9.4	Packaging	62
Annex A	(informative) National situations	69
A.1	Connection requirements in force in various countries (see 5.1.4)	69
A.2	Requirements for flue connection in force in various countries (see 5.1.6.5)	70
A.3	Categories, test gases and test pressures	71
Annex B	(normative) Use of symbols on appliances and packaging.....	72
B.1	General.....	72
B.2	Electric power supply.....	72
B.3	Type of gas	72
B.4	Gas supply pressure	72
B.5	Country of destination	73
B.6	Category	73
B.7	Other optional information	73
B.8	Nominal heat input of burner.....	73
B.9	Nominal heat input of set of burners on appliance.....	73
Annex C	(informative) Trilingual list of appliances in the scope of EN 203-1 and corresponding Part 2	74
Annex D	(normative) Non pneumatic air/gas control devices.....	75
D.1	Requirements	75
D.1.1	Endurance	75
D.1.2	Leakage of non-metallic control tubes	75
D.1.3	Safety of operation	75
D.1.4	Adjustment of air/gas ratio	75
D.2	Tests.....	76
D.2.1	Endurance	76
D.2.2	Leakage of non-metallic control tubes	76
D.2.3	Safety of operation	76
D.2.4	Adjustment of the air/gas ratio controls	77
Annex E	(informative) Composition of the gas circuit	78
E.1	Minimum requirements for:	78

საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.

E.2 Minimum requirements for appliances with fan, without permanent or alternating ignition burner and without pre-purge 79

Annex ZA (informative) Clauses of this European Standard addressing essential requirements or other provisions of EU Directives 80

Bibliography 82

საინფორმაციო ნაწილი. სრული ტექსტის სახასიათოდ შეიძინეთ სტანდარტი.

Foreword

This document (EN 203-1:2014) has been prepared by Technical Committee CEN/TC 106 “Gas heated catering equipment”, 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 August 2014 and conflicting national standards shall be withdrawn at the latest by August 2014.

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

This document supersedes EN 203-1:2005+A1:2008.

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.

Questions relating to quality assurance systems, manufacturing tests and certificates of conformity of ancillary devices in particular, are not covered by this document.

This European Standard constitutes Part 1 of EN 203, *Gas heated catering equipment*. It states the definitions, the requirements of construction and performance, the test requirements, the requirements of marking applicable to all professional catering equipment mainly on matters of safety. The particular requirements relative to safety and rational use of energy for each specific type of appliance are the subjects of Part 2: *Specific requirements*. The particular requirements relative to materials and parts in contact with food and other sanitary aspects are the subjects of Part 3: *Materials and parts in contact with food and other sanitary aspects*.

The main changes compared to the former version are the following:

- forbid the use of needle taps;
- addition of requirements for regulated appliances;
- declaration and checking of a minimum rate;
- better definition of normal and abnormal operation;
- requirement on TSA for automatic burners;
- measurement of TSE;
- information on LPG cylinders and tubes and flexible hoses;
- clarification on the fact that doors are not working surfaces;
- addition of sequential burners;
- reference to national regulation for connection to water network.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece,

საინფორმაციო ნაწილი. სრული ტექსტის სახანავედ შეიძინეთ სტანდარტი.

Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.