

საქართველოს ეროვნული სტანდარტი

აირზე მომუშავე ტიპის ნომინალური სითბოს მიმჰვანი საშრობი
მანქანები არაუმეტეს 20 kW. ნაწილი 1. უსაფრთხოება

საქართველოს სტანდარტების, ტექნიკური რეგლამენტების
და მეტროლოგიის ეროვნული სააგენტო
თბილისი

საინფორმაციო მონაცემები

1 შემუშავებულია საქართველოს სტანდარტების, ტექნიკური რეგლამენტების და მეტროლოგიის ეროვნული სააგენტოს სტანდარტებისა და ტექნიკური რეგლამენტების დეპარტამენტის მიერ

2 დამტკიცებულია და შემოღებულია სამოქმედოდ საქართველოს სტანდარტების, ტექნიკური რეგლამენტების და მეტროლოგიის ეროვნული სააგენტოს 2010 წლის 6 აპრილის №68 “ს” განკარგულებით

3 მიღებულია გარეკანის მეთოდით სტანდარტიზაციის საერთაშორისო ორგანიზაციის სტანდარტი ISO ე6 12752-1 : 1999 „ აირზე მომუშავე B ტიპის ნომინალური სითბოს მიმყვანი საშრობი მანქანები არაუმეტეს 20 kW. ნაწილი 1. უსაფრთხოება”

4 პირველად

5 რეგისტრირებულია საქართველოს სტანდარტების, ტექნიკური რეგლამენტების და მეტროლოგიის ეროვნული სააგენტოს რეესტრში: 2010 წლის 6 აპრილი №268-13-4219

წინამდებარე სტანდარტის სრული ან ნაწილობრივი აღწარმოება, ტირაჟირება და გავრცელება საქართველოს სტანდარტების, ტექნიკური რეგლამენტების და მეტროლოგიის ეროვნული სააგენტოს ნებართვის გარეშე არ დაიშვება

English version

Gas-fired type B tumble dryers of nominal heat input not
exceeding 20 kW - Part 1: Safety

Sèche-linge de type B à tambour utilisant les combustibles
gazeux, de débit calorifique nominal ne dépassant pas 20
kW - Partie 1: Sécurité

Gasbefeuerte Trommeltrockner Typ B mit
Nennwärmebelastungen bis 20 kW - Teil 1: Sicherheit

This European Standard was approved by CEN on 3 July 1999.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Contents

	Page
FOREWORD	7
1 Scope	8
2 Normative references	8
3 Definitions	9
3.1 Direct gas-fired tumble dryer	10
3.2 Gases	10
3.3 Conditions of operation and measurement	12
3.4 Appliance construction	12
3.5 Immobilizing an adjuster or a control	14
3.6 Appliance performance	14
3.7 Marking of the appliance and packaging	16
4 Classification of appliances	17
4.1 Classification according to the nature of the gases used (categories)	17
4.2 Classification according to the mode of supply of combustion air and evacuation of the combustion products	20
5 Construction and design requirements	21
5.1 General	21
5.1.1 Conversion to different gases	21
5.1.2 Materials and method of construction	22
5.1.3 Screws	23
5.1.4 Maintenance and use	23
5.1.5 Thermal insulation	23
5.1.6 Gas connection	24
5.1.7 Soundness	24
5.1.8 Supply of combustion air and evacuation of combustion products	25
5.1.9 Lint collection	26
5.1.10 Flame visibility	26
5.1.11 Electrical equipment	26
5.1.12 Motors and fans	27
5.1.13 Operational safety in the event of fluctuation, interruption and restoration of the auxiliary energy	27
5.1.14 Combustion air flow failure (direct gas-fired appliances)	28
5.2 Requirements for adjusting, control and safety devices	28
5.2.1 General	28
5.2.2 Automatic shut-off valves	28
5.2.3 Multifunctional controls	29
5.2.4 Flame supervision devices	29
5.2.5 Governors	29

5.2.6 Gas rate adjusters	30
5.2.7 Automatic burner control systems	30
5.2.8 Gas strainers	30
5.2.9 Spillage monitoring device	31
5.3 Ignition devices	31
5.3.1 General	31
5.3.2 Ignition device for the main burner	31
5.3.3 Ignition burners	32
5.4 Ignition burner or start-gas flame establishment	32
5.5 Main flame establishment	32
5.5.1 Establishment by means of an ignition burner or start-gas flame	32
5.5.2 Direct establishment of the main flame e.g. spark ignition hot surface igniter	32
5.6 Burners	33
5.7 Thermostats and control of air temperature	33
5.7.1 General requirements	33
5.7.2 Temperature limiting device	33
5.8 Clocks and timing devices	33
5.9 Gas pressure test points	34
5.10 Door interlocks	34
6 Operational safety	34
6.1 General	34
6.1.1 Characteristics of test gases: reference and limit gases	34
6.1.2 Conditions for preparation of test gases.	36
6.1.3 Practical application of test gases	37
6.1.4 Test pressures	39
6.1.5 Use of test gases	41
6.1.6 Test room	42
6.1.7 Preparation of the appliance	42
6.1.8 Test conditions	42
6.2 Screw connections	46
6.2.1 Requirements	46
6.2.2 Tests	46
6.3 Mechanical hazards	46
6.3.1 Door interlocks	46
6.3.2 Supplementary requirements and tests for appliances with an opening dimension exceeding 30 cm and a drum volume exceeding 100 dm ³	47
6.3.3 Stability of appliances	47
6.4 Manually operated devices of the automatic burner control system	48
6.4.1 Requirements	48
6.4.2 Tests	48
6.5 Soundness	48
6.5.1 Soundness of the gas circuit	48
6.5.2 Soundness of the combustion circuit and correct evacuation of the combustion products	49
6.6 Heat inputs	50

6.6.1	Nominal heat input	50
6.6.2	Heat input at reduced rate	53
6.6.3	Heat input of ignition burners	53
6.7	Burners	53
6.7.1	Resistance to overheating	53
6.7.2	Escape of unburnt gas	54
6.8	Limiting temperature of various parts of the appliance	54
6.8.1	Requirements	54
6.8.2	Tests	55
6.9	Limiting temperature of floor, walls and worktops	55
6.9.1	Requirements	55
6.9.2	Tests	56
6.10	Limiting temperature of components	56
6.10.1	Normal operation	56
6.10.2	Severe operation	57
6.10.3	Abnormal operation	57
6.11	Motor temperatures	57
6.11.1	Motor bearings	57
6.11.2	Motor windings	59
6.12	Ignition, cross-lighting and flame stability	59
6.12.1	Ignition and cross-lighting	59
6.12.2	Flame stability	61
6.12.3	Supplementary requirements and tests	62
6.13	Flame supervision devices	62
6.13.1	Safety time	62
6.13.2	Extinction safety time	63
6.14	Governors	63
6.14.1	Requirements	63
6.14.2	Tests	63
6.15	Combustion	64
6.15.1	General	64
6.15.2	Requirements	65
6.15.3	Tests under normal conditions	66
6.15.4	Supplementary tests under special conditions	67
6.16	Sooting	68
6.16.1	Direct gas-fired appliances	68
6.16.2	Indirect gas-fired appliances	69
6.17	Cyclic operation test	69
6.17.1	Requirements	69
6.17.2	Tests	70
6.18	Spillage monitoring device (type B _{11BS} appliances)	70
6.18.1	General	70
6.18.2	Nuisance shut-down	71
6.18.3	Shut-down time	71
7	Marking	72
7.1	Marking of the appliance	72

7.1.1 Data plate	72
7.1.2 Warning notices	73
7.1.3 Other marking	74
7.2 Marking of the packaging	74
7.3 Utilization of symbols on the appliance and packaging	75
7.3.1 Electrical supply	75
7.3.2 Type of gas	75
7.3.3 Gas supply pressure	75
7.3.4 Country of destination	75
7.3.5 Category	76
7.3.6 Other optional information	76
7.4 Instructions	78
7.4.1 General	78
7.4.2 Technical instructions for installation and adjustment	78
7.4.3 Instructions for use and maintenance	80
7.5 Presentation	81

Tables

1 Classification of gases	17
2 Characteristics of the test gases	35
3 Calorific values of the test gases of the third family	36
4 Test gases corresponding to appliance categories	38
5 Test pressures where no pressure couple exists	40
6 Test pressures where a pressure couple exists	41
7 Standard load I for cotton (dry cotton load programme)	44
8 Standard load II for cotton (dry cotton load programme)	45
9 Torque values for screws	46
10 Maximum temperature raise in parts of the appliance that are likely to be touched accidentally	55
11 $V_{CO_2,N}$ values	65
12 Shut-down time as a function of the blockage	71
13 Symbols of the reference gases	75
14 Means of identification of types of gas in use in the various countries	77

Figures

1 Apparatus for measuring floor and wall temperatures	82
2 Probe for measuring surface temperature	83
3 Test of type B ₁₁ and type B _{11BS} appliances under abnormal draught conditions	84
4 Spillage monitoring device	85

Annexes

A (informative) National situations	86
A.1 Categories listed in the body of the standard marketed in the different countries	86

A.2	Appliance supply pressures corresponding to the categories given in A.1	89
A.3	Special categories marketed nationally or locally and corresponding test gases	90
A.4	Test gases corresponding to the special categories given in A.3	93
A.5	Gas connections in the various countries	95
A.6	Flue connections in the various countries	96
A.7	Equivalence rules	97
B	(normative) Special national conditions	99
ZA	(informative) Clauses of this European Standard addressing essential requirements or other provisions of EU Directives	100

FOREWORD

This European Standard has been prepared by Technical Committee CEN/TC 299 "Gas-fired sorption appliances and domestic gas-fired washing and drying appliances", the secretariat of which is held by AENOR.

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 February 2000, and conflicting national standards shall be withdrawn at the latest by February 2000.

This European Standard 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 standard.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

The Directive makes no specification in respect of the maximum rating of appliances falling within its scope. However, the scope of this standard has been limited to appliances having heat inputs not greater than 20 kW.

For domestic tumble dryers of types B_{22D} and B_{23D} of nominal heat input not exceeding 6 kW see prEN 1458-1 and prEN 1458-2.

The test gases, test pressures and appliance categories given in this European Standard are in accordance with those specified in EN 437: *"Test gases, test pressures and appliance categories"*.

The marking requirements in this European Standard take into account CR 1472 *"General guidance for the of gas appliances"*.