Iseseisvad gaasiküttega konvektsioonkütte seadmed

Independent gas-fired convection heaters



EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 613:2001 sisaldab Euroopa standardi EN 613:2000 ingliskeelset teksti.

Käesolev dokument on jõustatud 18.05.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 613:2001 consists of the English text of the European standard EN 613:2000.

This document is endorsed on 18.05.2001 with the notification being published in the official publication of the Estonian national standardisation organisation.

The standard is available from Estonian standardisation organisation.

Käsitlusala:

This European Standard specifies the requirements and test methods for the construction, safety, marking and rational use of energy of independent gas-fired convection heating appliances, hereafter referred to as appliances.

Scope:

This European Standard specifies the requirements and test methods for the construction, safety, marking and rational use of energy of independent gas-fired convection heating appliances, hereafter referred to as appliances.

ICS 97.100.20

Võtmesõnad: classifications, definitions, efficiency, equipment specification, gas appliances, heaters, marking, name plates, operating requirements, performance evaluation, safety, space heaters, technical notices, tests

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN 613

Ref. No. EN 613: 2000 E

December 2000

ICS 97.100.20

English version

Independent gas-fired convection heaters

Appareils de chauffage indépendants à convection utilisant les combustibles gazeux Konvektions-Raumheizer für gasförmige Brennstoffe

This European Standard was approved by CEN on 2000-07-13.

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 Management Centre or to any CEN member.

The European Standards exist 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 Management Centre has the same status as the official versions.

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

CEN

European Committee for Standardization Comité Européen de Normalisation Europäisches Komitee für Normung

Management Centre: rue de Stassart 36, B-1050 Brussels

Contents	Page
Foreword	4
	•
1 Scope	5
2 Normative references	6
3 Terms and definitions	7
3.1 Independent gas-fired convection heaters	7
3.2 Gases	8
3.3 Appliance construction	10
3.4 Adjusters and controls	13
3.5 Appliance performance	13
3.6 Marking of the appliance and packaging	15
4 Classification of appliances	16
4.1 Classification according to the nature of the gases used (categories)	16
4.2 Classification according to the method of evacuation of the products of combustion	19
5 Constructional requirements	21
5.1 General	21
5.2 Adjusting, control and safety devices	28
5.3 Ignition devices	32
5.4 Flame supervision systems	33
5.5 Burners	34
5.6 Motors and fans	34
5.7 Gas pressure test points	34
6 Operational requirements	34
6.1 General	34
6.2 Soundness of the gas circuit and combustion products circuit, and evacuation of the	
combustion products	34
6.3 Heat inputs	36
6.4 Temperature of various parts of the appliance	37
6.5 Ignition, cross-lighting and flame stability	38
6.6 Pressure governors	39
6.7 Combustion	39
6.8 Sooting (live fuel effect appliances only)	40
6.9 Spillage monitoring system	41
6.10 Flame supervision device	42
combustion products 6.3 Heat inputs 6.4 Temperature of various parts of the appliance 6.5 Ignition, cross-lighting and flame stability 6.6 Pressure governors 6.7 Combustion 6.8 Sooting (live fuel effect appliances only) 6.9 Spillage monitoring system 6.10 Flame supervision device 6.11 Efficiency	43
7 Test methods	45
7.1 General	45

7.2 Soundness of the gas circuit and combustion products circuit, and evacuation of the		
combustion products		
7.3 Heat inputs		
7.4 Temperature of various parts of the appliance		
7.5 Ignition, cross-lighting and flame stability		
7.6 Pressure governors		
7.7 Combustion		
7.8 Sooting (live fuel effect appliances only)		
7.9 Spillage monitoring system		
7.10 Flame supervision device		
7.11 Efficiency	80	
8 Marking and instructions	82	
8.1 Marking	83	
8.2 Instructions	87	
o.z mstructions	07	
Annex A (informative) National situations	103	
Annex B (informative) Equivalence rules	115	
Annex B (informative) Equivalence rules	113	
Annex C (normative) Spillage test methods	118	
Annex D (informative) Gas valve arrangements	125	
Annoy E (informative) Moone of identification of the times of any in faces in the		
Annex E (informative) Means of identification of the types of gas in force in the	100	
various countries	126	
Annex F (normative) High voltage ignition circuits	127	
Annex G (normative) Apparatus for the determination of the smoke number	130	
Almex O (normative) Apparatus for the determination of the smoke number	130	
Annex H (informative) Symbols and abbreviations	132	
Annex J (normative) Calculation of conversions of NO _x	133	
Annex K (normative) Special national conditions	134	
Annex L (informative) A-deviations	135	
Annex ZA (informative) Clauses of this European Standard addressing essential		
requirements or other provisions of EU Directives	136	
Bibliography	139	
	J'	

Page 4 EN 613 : 2000

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 62 "Independent gas-fired space heaters", the secretariat of which is held by BSI.

This European Standard replaces HD 1002:1994.

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 2001, and conflicting national standards shall be withdrawn at the latest by June 2001.

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, Gea. Spain, . Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

2/2

1 Scope

This European Standard specifies the requirements and test methods for the construction, safety, marking and rational use of energy of independent gas-fired convection heating appliances, hereafter referred to as appliances.

This standard is applicable to types B_{11AS} , B_{11BS} , B_{11CS} (commonly referred to in this standard as type B_1 appliances) and type C_{11} independent convection heating appliances burning gas:

- that incorporate a natural draught burner;
- that are connected directly to an open flue or to a device to evacuate the products of combustion (open-flued appliances, balanced-flued appliances);
- that are wall mounted, free-standing or built-in;
- that have a nominal heat input not exceeding 20 kW (based on the net calorific value).

In addition, this standard is applicable to live fuel effect appliances.

This standard is not applicable to:

- open fronted appliances as specified in prEN 13278;
- decorative fuel effect appliances as specified in EN 509;
- catalytic combustion appliances;
- appliances in which the supply of combustion air and/or evacuation of products of combustion is achieved by mechanical means;
- ducted-air appliances;
- appliances installed by means of a closure plate (see 3.3.3.3).

This standard is only applicable to appliances which are intended to be type tested.

Matters related to quality assurance systems, tests during production and to certificates of conformity of auxiliary devices are not dealt with by this standard.

Page 6 EN 613 : 2000

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 88: 1991	Pressure governors for gas appliances for inlet pressure up to 200 mbar
EN 125: 1991	Flame supervision devices for gas-burning appliances - Thermo-electric flame supervision devices
EN 126: 1995	Multifunctional controls for gas burning appliances
EN 161: 1991	Automatic shut-off valves for gas burners and gas appliances
EN 257: 1992	Mechanical thermostats for gas burning appliances
EN 298: 1993	Automatic gas burner control systems for gas burners and gas burning appliances with or without fans
EN 437: 1993	Test gases - Test pressures - Appliance categories
EN 23166: 1993	Codes for the representation of names of countries (ISO 3166: 1993)
EN 60335-1: 1994	Safety of household and similar electrical appliances Part 1: General requirements (IEC 60335-1: 1991, modified)
EN 60529: 1991	Degrees of protection provided by enclosures (IP code) (IEC 60529: 1989)
EN 60730-2-9: 1995	Automatic electrical controls for household and similar use Part 2: Particular requirements for temperature sensing controls (IEC 60730-2-9: 1992, modified)
CR 1404: 1994	Determination of emissions from appliances burning gaseous fuels during type testing
ISO 7-1: 1994	Pipe threads where pressure-tight joints are made on the threads - Part 1: Dimensions, tolerances and designation

ISO 228-1: 1994 Pipe threads where pressure-tight joints are not made on the threads -

Part 1: Dimensions, tolerances and designation

ISO 274: 1975 Copper tubes of circular section - Dimensions

3 Terms and definitions

For the purpose of this standard the following terms and definitions apply:

3.1 Independent gas-fired convection heaters

- **3.1.1 convection heater:** An appliance that is designed to heat a room mainly by the emission of air heated by convection. Such an appliance may also contain radiant heating elements provided that it complies with all the requirements of this standard.
- **3.1.2 forced convection heater:** A convection appliance that incorporates a fan and thus allows an acceleration of the circulation of the air in contact with the heating body. Such an appliance is designed to discharge air directly into the room in which the appliance is installed and not to be connected to a warm air distribution system.
- **3.1.3 live fuel effect convection heater:** A convection appliance which simulates the visual effect of a solid fuel appliance.
- **3.1.4 open-fronted appliance:** An appliance which has exposed flames or exposed incandescent areas.
- **3.1.5 working surfaces:** Those parts of an appliance, which, due to the nature of the appliance, have temperatures exceeding the limits specified in 6.4.1 excluding parts that are likely to be touched during operations carried out in the normal use of the appliance, for example, the area adjacent to control knobs.

Working surfaces do not include that part of any surface within 25 mm of parts that have to be touched or removed during normal operation of the appliance.

3.1.6 convection fan: A device to assist in the distribution of heated air.

