

**Vedelgaasiseadmete tehniline kirjeldus.
Kodumajapidamises kasutatavad
heitgaasita ruumisoojendid (kaasa
arvatud difuussed katalüütilised
põlemissoojendid)**

Specification for dedicated liquefied petroleum gas
appliances - Domestic flueless space heaters
(including diffusive catalytic combustion heaters)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 449:2003 sisaldab Euroopa standardi EN 449:2002 ingliskeelset teksti.	This Estonian standard EVS-EN 449:2003 consists of the English text of the European standard EN 449:2002.
Käesolev dokument on jõustatud 18.02.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.	This document is endorsed on 18.02.2003 with the notification being published in the official publication of the Estonian national standardisation organisation.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

Käsitlusala: This standard specifies the requirements, the test methods and the marking of domestic flueless space heaters, including diffusive catalytic combustion heaters, having a nominal heat input (Hs), not exceeding 4,2 kW burning 3rd family gases at nominal operating pressures not exceeding 50 mbar, referred to in the text as 'appliances'	Scope: This standard specifies the requirements, the test methods and the marking of domestic flueless space heaters, including diffusive catalytic combustion heaters, having a nominal heat input (Hs), not exceeding 4,2 kW burning 3rd family gases at nominal operating pressures not exceeding 50 mbar, referred to in the text as 'appliances'
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Võtmesõnad: classifications, household appliances, instructions, liquefied petroleu, liquefied petroleum gas installations, liquefied petroleum gases, marking, room heaters, safety, safety engineering, safety requirements, specification (approval), specifications, testing

English version

**Specification for dedicated liquefied petroleum gas appliances -
Domestic flueless space heaters (including diffusive catalytic
combustion heaters)**

Spécifications pour les appareils fonctionnant
exclusivement aux gaz de pétrole liquéfiés - Appareils de
chauffage domestiques non raccordés (y compris les
appareils de chauffage à combustion catalytique diffusive)

Festlegungen für Flüssiggasgeräte - Abzuglose
Haushaltsraumheizgeräte (einschließlich Heizgeräte mit
diffusiver katalytischer Verbrennung)

This European Standard was approved by CEN on 9 September 2002.

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.

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 Management Centre 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, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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Foreword

This document (EN 449:2002) has been prepared by Technical Committee CEN/TC 181 "Dedicated liquefied petroleum gas appliances", 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 May 2003, and conflicting national standards shall be withdrawn at the latest by May 2003.

This document supersedes EN 449:1996.

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.

This standard cancels and replaces EN 449:1996. Relating to the 1996 version, this standard introduces technical modifications in particular on marking requirements, construction requirements, flow rate requirements, and several test methods of which life test for catalytic combustion appliances.

Items relating to quality assurance systems, production testing and particularly certificates of conformity of auxiliary equipment are not covered by this standard.

Annexes A and B are normative elements of this standard. Annex C is informative.

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, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard specifies the requirements, the test methods and the marking of domestic flueless space heaters, including diffusive catalytic combustion heaters, having a nominal heat input (H_S), not exceeding 4,2 kW burning 3rd family gases at nominal operating pressures not exceeding 50 mbar, referred to in the text as 'appliances'.

This European Standard is applicable to the following types of appliances:

- a) fixed heaters burning commercial butane and/or commercial propane;
- b) portable or mobile heaters burning either commercial butane, or, commercial butane and commercial propane including those that incorporate a LPG container installation compartment for a transportable refillable liquefied petroleum LPG container.

There are no specific thermal efficiency requirements appropriate to these types of appliance as:

- c) all the heat produced by the combustion process is released into the space to be heated;
- d) the requirements with regard to the combustion performance, which is a safety matter, ensure the effective burning of the fuel gas.

It does not cover appliances incorporating electrically operated gas control systems.

Annex A gives the details of the categories of appliances marketed in various countries.

Requirements for appliances given in this standard assume that the supply of gas from the container will be governed by a pressure regulator having a maximum nominal outlet pressure of 50 mbar.

This European Standard does not cover LPG containers for liquefied petroleum gas neither their associated regulator nor tubing and flexible hoses which shall comply with national requirements in force.

This European Standard only covers type testing.

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 125, *Flame supervision devices for gas burning appliances - Thermo-electric flame supervision devices.*

EN 126, *Multifunctional controls for gas burning appliances.*

EN 161, *Automatic shut-off valves for gas burners and gas appliances.*

EN 257, *Mechanical thermostats for gas burning appliances.*

EN 437:1993, *Test gases - Test pressures - Appliance categories.*

EN 549, *Rubber materials for seals and diaphragms for gas appliances and gas equipment.*

EN 751-1, *Sealing materials for metallic threaded joints in contact with 1st, 2nd and 3rd family gases and hot water - Part 1: Anaerobic jointing compounds.*

EN 751-2, *Sealing materials for metallic threaded joints in contact with 1st, 2nd and 3rd family gases and hot water - Part 2: Non-hardening jointing compounds.*

EN 1057, *Copper and copper alloys - Seamless, round copper tubes for water and gas in sanitary and heating applications.*

EN 60335-1:1994, *Safety of household and similar electrical appliances - Part 1: General requirements (IEC 60335-1:1991, modified).*

EN ISO 3166-1, *Codes for the representation of names of countries and their subdivisions - Part 1: Country codes (ISO 3166-1:1997).*

ISO 7-1, *Pipe threads where pressure-tight joints are made on the threads - Part 1: Dimensions, tolerances and designation.*

ISO 228-1, *Pipe threads where pressure-tight joints are not made on the threads - Part 1: Dimensions, tolerances and designation.*

CR 1472:1997, *General guidance for the marking of gas appliances.*

CR 1749, *European scheme for the classification of gas appliances according to the method of evacuation of the products of combustion (Types).*

3 Terms and definitions

For the purposes of this European Standard, the following terms and definitions apply.

3.1

appliance incorporating a LPG container

appliance which includes a LPG container installation compartment

3.2

auxiliary equipment

- tap and cocks;
- flame supervision devices;
- thermostats;
- multifunctional controls;
- automatic shut-off valves.

3.3

burner

component that allows the gas to burn.

Two types are distinguished:

- non-aerated burner: in which the air for combustion is entrained entirely at the burner outlet or at the burner surface for catalytic burners;
- aerated burner in which part of the air for combustion, termed primary air, is entrained by the gas flow and mixed before the burner outlet. The remainder of the air drawn in at the port, termed secondary air, is drawn in after the burner outlet or at the burner surface for catalytic burners