

**Gaasiküttega absorptsiooni ning
absorptsiooni kliima- ja/või
soojuspumbaseadmed, mille kasulik
soojuskoormus ei ületa 70 kW. Osa 1:
Ohutus**

Gas-fired absorption and adsorption air-conditioning
and/or heat pump appliances with a net heat input
not exceeding 70 kW - Part 1: Safety

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 12309-1:2000 sisaldab Euroopa standardi EN 12309-1:1999 ingliskeelset teksti. Käesolev dokument on jõustatud 11.01.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 12309-1:2000 consists of the English text of the European standard EN 12309-1:1999. This document is endorsed on 11.01.2000 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.
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Käsitlusala: This standard specifies the requirements and test methods for the safety of gas-fired absorption and adsorption air-conditioning and/or heat pump appliances having a net heat input not exceeding 70 kW. The standard applies to appliances having flue systems of Type B11, B11AS, B11BS, B12, B13, B14, B22, B23, C11, C12, C31, C 32 and C33, and to appliances designed for outdoor installations.	Scope: This standard specifies the requirements and test methods for the safety of gas-fired absorption and adsorption air-conditioning and/or heat pump appliances having a net heat input not exceeding 70 kW. The standard applies to appliances having flue systems of Type B11, B11AS, B11BS, B12, B13, B14, B22, B23, C11, C12, C31, C 32 and C33, and to appliances designed for outdoor installations.
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Võtmesõnad: adsorption, air conditioners, air conditioning, air conditioning equipment, gas appliances, gaseous effluent disposal, heat of absorption, heat pumps, performance evaluation, safety, specifications, tests

English version

**Gas-fired absorption and adsorption air conditioning
and/or heat pump appliances with a net heat input
not exceeding 70 kW**

Part 1: Safety

Appareils de climatisation et/ou
pompes à chaleur à absorption ou
adsorption fonctionnant au gaz de
débit calorifique sur PCI inférieur ou
égal à 70 kW – Partie 1: Sécurité

Gasbefeuerte Absorptions- und
Adsorptions-Klimageräte und/oder
Wärmepumpengeräte mit einer
Nennwärmebelastung nicht über
70 kW – Teil 1: Sicherheit

This European Standard was approved by CEN on 1998-11-27.

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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.

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CEN

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

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

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

CEN/TC 299 intends to prepare an amendment to this European Standard for appliances that fall within the scope of EU Directive 97/23/EEC, in order to address its essential requirements.

Requirements and methods of test covering rational use of energy for gas-fired absorption and adsorption air-conditioning and/or heat pump appliances are in the course of preparation and will be published as EN 12309-2.

1 Scope

This European standard specifies the requirements and test methods for the safety of gas-fired absorption and adsorption air-conditioning and/or heat pump appliances having a net heat input not exceeding 70 kW, hereafter referred to as "appliances".

This standard applies to appliances having flue systems of Type B₁₂, B_{12BS}, B₁₃, B_{13BS}, B₁₄, B₂₂, B₂₃, C₁₂, C₁₃, C₃₂ and C₃₃, and to appliances designed for outdoor installations.

This standard only applies to appliances having:

- integral burners under the control of fully automatic burner control systems;
- closed system refrigerant circuits in which the refrigerant does not come into direct contact with the water or air to be cooled or heated;
- mechanical means to assist transportation of the combustion air and/or the flue gases.

Appliances covered by this standard include one or a combination of the following:

- Gas-Fired Absorption Air Conditioner;
- Gas-Fired Adsorption Air Conditioner;
- Gas-Fired Absorption Heat Pump;
- Gas-Fired Adsorption Heat Pump.

The above appliances may have one or more primary or secondary functions (see 3.1.5 and 3.1.6) and this standard applies to all such functions providing that the function concerned is dependent on circulation of fluid within the absorption, or adsorption, refrigerant circuit.

NOTE: Any appliance function that is not dependent on circulation of the fluid within the absorption, or adsorption, refrigerant circuit should be assessed separately.

This standard does not apply to appliances fitted with more than one flue outlet.

This standard is applicable to appliances that are intended to be type tested. Requirements for appliances that are not type tested would need to be subject to further consideration.

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.

EN 88: 1991	Pressure governors for gas appliances for inlet pressures up to 200 mbar
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+A1: 1996	Mechanical thermostats for gas - burning appliances
EN 298: 1993	Automatic gas burner control systems gas burners and gas burning appliances with or without fans
prEN 378-3:1994	Refrigerating systems and heat pumps. Safety and environmental requirements - Part 3: classification of refrigerating systems, occupancies and refrigerants
EN 437: 1993	Test gases - Test pressures - Appliance categories
EN 50165: 1997	Electrical equipment of non-electric heating appliances for household and similar purposes – Safety requirements
EN 60335-1: 1995	Safety of household and similar electrical appliances - Part 1: General requirements
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 2-9: Particular requirements for temperature sensing controls (IEC 60730-2-9: 1992, modified)
EN ISO 3166-1: 1997	Codes for the representation of names of countries – Part 1: Country codes (ISO 3166-1: 1997)
CR 1749: 1995	European scheme for the classification of gas appliances according to the method of evacuation of the products of combustion (types)
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.
ISO 1182: 1990	Fire tests - Building materials - Non-combustibility test
ISO 3864: 1984	Safety colours and safety signs.

ISO 6976: 1995	Natural gas - Calculation of calorific values, density, relative density and Wobbe index from composition
ISO 7005-1:1992	Metallic flanges – Part 1: Steel flanges.
ISO 7005-2: 1988	Metallic flanges – Part 2: Cast iron flanges.
ISO 7005-3:1988	Metallic flanges – Part 3: Copper alloy and composite flanges.

3 Definitions

For the purposes of this standard, the following definitions apply:

3.1 Appliance and its constituent parts

3.1.1 air-conditioning appliance: appliance which is capable of providing full air conditioning (i.e. cooling, heating and humidity control); or which only provides the cooling and possibly the heating functions.

3.1.2 chiller: Air conditioning appliance utilizing an absorption or adsorption refrigerant cycle which is designed to provide cooling as a primary function and may provide heating as a secondary function.

3.1.3 chiller/Heater: Air-conditioning appliance utilizing an absorption or adsorption refrigerant cycle which is designed to provide cooling and heating, both as primary functions.

3.1.4 heat pump appliance: Heating appliance utilizing a refrigerant to extract heat from one medium (e.g. air, water, etc.) and transfer it to a second medium (e.g. air, water, etc.) at a higher temperature in order to contribute to the heating function of the appliance.

3.1.5 primary function: Main purpose for which the air conditioning or heat pump appliance is designed. In the case of an air conditioning appliance this is normally the cooling function. In the case of a heat pump this is normally the heating function. (Both the heating and cooling functions of the appliance may be classed as primary functions if they satisfy the rational use of energy requirements¹ for those functions.)

3.1.6 secondary function: Optional function of the appliance, such as heating or cooling, which is not expected to satisfy the rational use of energy requirements of a primary function.

3.1.7 open system: System in which the fluid (e.g. water, ammonia, etc.) which provides heating or cooling comes into direct contact with the fluid (e.g. water, air, etc.) which is to be heated or cooled.

3.1.8 closed system: System in which the fluid within the refrigerant circuit (e.g. water, ammonia, etc.) which provides heating or cooling does so without coming into contact with the surrounding air and with the heat transfer medium (e.g. water, brine, air).

¹ See prEN 12309-2 which is in the course of preparation.