

**Gaasiküttega absorptsiooni ning  
absorptsiooni kliima- ja/või  
soojuspumbaseadmed, mille kasulik  
soojuskoormus ei ületa 70 kW. Osa 2:  
Energia ratsionaalne kasutamine**

Gas-fired absorption and adsorption air-conditioning  
and/or heat pump appliances with a net heat input  
not exceeding 70 kW - Part 2: Rational use of  
energy

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 12309-2:2000 sisaldab Euroopa standardi EN 12309-2:2000 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 17.07.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 12309-2:2000 consists of the English text of the European standard EN 12309-2:2000.</p> <p>This document is endorsed on 17.07.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This standard specifies the requirements and methods of test for the rational use of energy 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 appliance having flue systems of Type B12, B12BS, B13, B13BS, B14, B22, B23, C12, C13, C32 and C33, and to appliances designed for outdoor installations.</p>	<p><b>Scope:</b></p> <p>This standard specifies the requirements and methods of test for the rational use of energy 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 appliance having flue systems of Type B12, B12BS, B13, B13BS, B14, B22, B23, C12, C13, C32 and C33, and to appliances designed for outdoor installations.</p>
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ICS 23.120, 27.080

Võtmesõnad:

**English version**

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

**Part 2: Rational use of energy**

Appareils de climatisation et/ou  
pompes à chaleur à absorption ou  
adsorption fonctionnant au gaz de  
débit calorifique sur PCI n'exédant  
pas 70 kW – Partie 2: Utilisation  
rationnelle de l'énergie

Gasbefeuerte Absorptions- und  
Adsorptions-Klimageräte und/oder  
Wärmepumpengeräte mit einer  
Nennwärmebelastung nicht über  
70 kW – Teil 2: Rationelle Energie-  
anwendung

This European Standard was approved by CEN on 1999-11-14.

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.

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 Central Secretariat 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

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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 July 2000, and conflicting national standards shall be withdrawn at the latest by July 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 first part of the standard specifies the requirements and test methods for the construction, safety, marking and testing of the appliances. The second part of the standard specifies the requirements for rational use of energy.

At present, this standard does not specify minimum efficiency values. This is because the standard covers a wide variety of gas-fired absorption and adsorption air conditioning and heat pump appliances, and there are, as yet, not enough examples of any one type of appliance on the European market to establish meaningful values for each of these types.

However, this standard does require manufacturers to declare the gas utilization efficiencies of their appliances and provides the means of verifying these under standardized conditions. This will enable reliable data on appliance efficiencies to be collected with the view to establishing minimum efficiency values for the various appliance types as soon as it is appropriate. It is therefore the intention of CEN/TC 299 to review this standard 2 years after its publication.

## 1 Scope

This European standard specifies the requirements and methods of test for the rational use of energy 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 B<sub>12</sub>, B<sub>12BS</sub>, B<sub>13</sub>, B<sub>13BS</sub>, B<sub>14</sub>, B<sub>22</sub>, B<sub>23</sub>, C<sub>12</sub>, C<sub>13</sub>, C<sub>32</sub> and C<sub>33</sub>, 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 fluid 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 can have one or more primary or secondary functions (see 3.5 and 3.6) 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 12309-1:1999 Gas-fired absorption and adsorption air-conditioning and/or heat pump appliances with a net heat input not exceeding 70 kW - Part 1: Safety

ISO 5151:1994 Non-ducted air conditioners and heat pumps - Testing and rating for performance

## 3 Terms and definitions

For the purposes of this standard, the definitions given in EN 12309-1:1999 and the following apply.

### 3.1

#### **heat recovery**

use of available heat from the appliance whose primary control remains in the cooling mode, by means of an additional heat exchanger.

### 3.2

#### **heat transfer medium**

any medium (e.g. air, water) used for the transfer of heat to or from refrigerant containing parts of the appliance; it may be:

- the cooled medium circulating in the evaporator;
- the cooling medium circulating in the condenser or absorber;
- the heat recovery medium circulating in the heat recovery heat exchanger.

### 3.3

#### **cooling capacity**

heat given off by the heat transfer medium to the refrigerant within a defined interval of time.

Symbol:  $Q_c$

Units: kilowatt (kW).