

**Gaasiküttega paagiveesoojendid  
sanitaarkasutusele**

Gas-fired storage water heaters for sanitary use

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 89:2000 sisaldab Euroopa standardi EN 89:1999+A1:1999 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 17.03.2000 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 89:2000 consists of the English text of the European standard EN 89:1999+A1:1999.

This standard is ratified with the order of Estonian Centre for Standardisation dated 17.03.2000 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

The standard is available from Estonian standardisation organisation.

ICS 91.140.65

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ICS 91.140.65

English version

Gas-fired storage water heaters for the production of domestic  
hot water

Appareils de production d'eau chaude par accumulation  
pour usages sanitaires utilisant les combustibles gazeux

Gasbeheizte Vorrats-Wasserheizer für den sanitären  
Gebrauch

This European Standard was approved by CEN on 12 June 1997.

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.

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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 48 "Domestic gas-fired water heaters", 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 April 2000, and conflicting national standards shall be withdrawn at the latest by April 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.

It was prepared to deal with aspects relating to:

- safety ;
- rational use of energy ;
- fitness for purpose.

The "normative" annexes are an integral part of the standard. The "informative" annexes are given only for information. In this standard, annexes B, C, E and J are normative and annexes A, D, F, G, H, K, L and ZA are informative.

This standard covers type testing only.

In particular, matters which relate to quality assurance systems, production tests and certification of conformity of auxiliary devices are not dealt with by this standard.

If the manufacturer indicates that the appliance has been tested in accordance with EN 89, the appliance shall conform completely to the requirements of this standard.

Type B<sub>11</sub> appliances shall be fitted with a combustion products discharge safety device. In this standard, these appliances are identified as being of type B<sub>11BS</sub>.

However, appliances intended to be installed :

- either in the open air ;
- or in a room separated from living rooms and provided with appropriate ventilation directly to the outside;

need not have this safety device, but in this case, appropriate warnings on the packaging and in the instructions shall clearly indicate the limit on the use of this type of appliance. In this standard, the appliance is designated as type B<sub>11</sub>.

In respect of potential adverse effects on the quality of water intended for human consumption, caused by the product covered by this standard :

- a) this standard provides no information as to whether the product may be used without restriction in any of the Member States of the EU or EFTA ;

- b) it should be noted that, while awaiting the adoption of verifiable European criteria, existing national regulations concerning the use and/or the characteristics of this product remain in force.

The following amendments are being prepared and will subsequently supplement EN 89 :

- amendment EN 89 A1 for appliances with burners with a fan ;
- amendment EN 89 prA2 on requirements for combustion products discharge orifice closure devices.

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## 1 Scope

This European Standard defines the specifications and test methods for the construction, safety, rational use of energy and fitness for purpose, environment and classification and marking of gas-fired storage water heaters for domestic hot water uses, hereafter called "appliance".

This standard applies to appliances :

- of types B<sub>11</sub>, B<sub>11BS</sub>, C<sub>11</sub>, C<sub>21</sub> and C<sub>31</sub> ;
- fitted with atmospheric burners ;
- using one or more combustible gases corresponding to the three gas families and the pressures indicated in EN 437 ;
- of nominal heat input not exceeding 150 kW (net calorific value) ;
- using or not the water condensation heat in the combustion products ;
- appliances whether subject to the water mains pressure or open-circuit.

This standard does not contain all the requirements necessary for :

- appliances fitted with a fan on the combustion circuit ;
- appliances intended to be connected to a mechanical means of evacuating the combustion products ;
- appliances which fulfill a dual role of space heating and heating water for domestic hot water use ;
- appliances with a combustion products discharge safety device other than that for type B<sub>11BS</sub> appliances ;
- appliances with electrical combustion products discharge orifice closure device downstream of the heat exchanger fitted to type B appliances and tested as an integral part of the appliance.

## 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, *Pressure governors for gas appliances for inlet pressures up to 200 mbar.*

EN 125, *Specification for flame supervision devices for gas burning appliances - Thermoelectric types.*

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

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

EN 298, *Automatic gas burner systems for gas burners and gas burning appliances with or without fans.*

EN 437, *Test gases, test pressures, appliance categories.*

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

EN 60335-1:1988, *Safety of household and similar electrical appliances - Part 1 : General requirements.*

EN 60730-2-9, *Automatic electrical controls for household and similar use - Part 2 : Particular requirements for temperature sensing controls.*

EN 60529, *Degrees of protection provided by enclosures (IP code).*

prEN 1487, *Building valves - Hydraulic Safety groups - Characteristics and tests.*

prEN 1490, *Building valves - Combined temperature and pressure relief valves - Characteristics and tests.*

prEN 50165, *Electrical equipment of non-electric heating appliances for household and similar appliances - Safety requirements.*

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

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

ISO 262, *ISO general purpose screw threads - Selected sizes for screws, bolts and nuts.*

ISO 274, *Copper tubes of circular section - Dimensions.*

ISO 301, *Zinc alloy ingots intended for casting.*

ISO 3166, *Codes for the representation of names of countries.*

ISO 7005, *Metallic flanges.*

IEC 335-2-14, *Safety of household and similar electrical appliances - Part 2 : Particular requirements for electric kitchen machines.*

IEC 479-1, *Effects of current on human beings and livestock - Part 1 : General aspects.*

IEC 479-2, *Effects of current passing through the human body - Part 2 : Special aspects - Chapter 4: Effects of alternating current with frequencies above 100 Hz - Chapter 5: Effects of special wave forms of current - Chapter 6: Effects of unidirectional single currents of short duration.*

### 3 Terms and definitions

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

#### 3.1 water heater

##### 3.1.1 storage water heater

an appliance which heats and stores a quantity of water contained in a vessel at a pre-set temperature and which has the heating source located inside the vessel

##### 3.1.2 fixed temperature storage water heater

an appliance fitted with a non-adjustable thermostat which controls the water temperature to a given setting

##### 3.1.3 adjustable temperature storage water heater

an appliance fitted with a thermostat controlling the water temperature with the set point value of this device being adjustable between two values, one being the minimum and the other the maximum

##### 3.1.4 open storage water heater

an appliance with a vent to the atmosphere