

## **Heating systems in buildings - Installation and commissioning of water based heating systems**

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commissioning of water based heating systems

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 14336:2004 sisaldab Euroopa standardi EN 14336:2004 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 21.12.2004 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 14336:2004 consists of the English text of the European standard EN 14336:2004.</p> <p>This document is endorsed on 21.12.2004 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> This European Standard specifies the requirements for the installation and commissioning of water-based heating systems in buildings with a maximum operating temperature of 110 oC and a maximum operating pressure of 6 bar. This standard covers the system's requirements for the installation and commissioning of individual components of the system (e.g. heat generators, pumps, controls). It does not cover the specific commissioning requirements for these components.</p>	<p><b>Scope:</b> This European Standard specifies the requirements for the installation and commissioning of water-based heating systems in buildings with a maximum operating temperature of 110 oC and a maximum operating pressure of 6 bar. This standard covers the system's requirements for the installation and commissioning of individual components of the system (e.g. heat generators, pumps, controls). It does not cover the specific commissioning requirements for these components.</p>
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ICS 91.140.10

Võtmesõnad:

ICS 91.140.10

English version

## Heating systems in buildings - Installation and commissioning of water based heating systems

Systèmes de chauffage dans les bâtiments - Installation et mise en systèmes de chauffage à eau

Heizungsanlagen in Gebäuden - Installation und Abnahme der Warmwasser-Heizungsanlagen

This European Standard was approved by CEN on 29 July 2004.

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.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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## Foreword

This document (EN 14336:2004) has been prepared by Technical Committee CEN/TC 228 "Heating systems in buildings", the secretariat of which is held by DS.

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 2005, and conflicting national standards shall be withdrawn at the latest by April 2005.

The subjects covered by CEN/TC 228 are the following:

- Design of heating systems (water based, electrical etc.);
- Installation of heating systems;
- Commissioning of heating systems;
- Instructions for operation, maintenance and use of heating systems;
- Methods for calculation of the design heat loss and heat loads;
- Methods for calculation of the energy performance of heating systems.

Heating systems also include the effect of attached systems such as hot water production systems.

All these standards are systems standards, i.e. they are based on requirements addressed to the system as a whole and not dealing with requirements to the products within the system.

Where possible, reference is made to other European or International Standards, a.o. product standards. However, use of products complying with relevant product standards is no guarantee of compliance with the system requirements.

The requirements are mainly expressed as functional requirements, i.e. requirements dealing with the function of the system and not specifying shape, material, dimensions or the like.

The guidelines describe ways to meet the requirements, but other ways to fulfil the functional requirements might be used if fulfilment can be proved.

Heating systems differ among the member countries due to climate, traditions and national regulations. In some cases requirements are given as classes so national or individual needs may be accommodated.

In cases where the standards contradict with national regulations, the latter should be followed.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

## 1 Scope

This document specifies the requirements for the installation and commissioning of water-based heating systems in buildings with a maximum operating temperature of 110 °C and a maximum operating pressure of 6 bar.

This document covers the system's requirements for the installation and commissioning of individual components of the system (e.g. heat generators, pumps, controls). It does not cover the specific commissioning requirements for these components.

This document does not cover the installation or commissioning of attached systems (e.g. air conditioning, domestic hot water or ventilation systems).

This document covers only the technical requirements, and does not cover any commercial or contractual arrangements between parties.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1717, *Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow.*

EN 12170, *Heating systems in buildings – Procedure for the preparation of documents for operation, maintenance and use – Heating systems requiring a trained operator.*

EN 12171, *Heating systems in buildings – Procedure for the preparation of documents for operation, maintenance and use – Heating systems not requiring a trained operator.*

EN 12828, *Heating systems in buildings – Design for water-based heating systems.*

EN 61082-1, *Preparation of documents used in electrotechnology – Part 1: General requirements (IEC 61082-1:1991).*

EN 61082-3, *Preparation of documents used in electrotechnology – Part 3: Connection diagrams, tables and lists (IEC 61082-3:1993).*

## 3 Terms and definitions

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

### 3.1

#### **balancing**

process of adjusting flow rates in a system

### 3.2

#### **commissioning**

advancement of an installation from the stage of static completion to working according to specified requirements

### 3.3

#### **flushing**

washing out of a piping system to a formal procedure to remove detritus

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