EESTI STANDARD EVS-EN 442-1:2000

Radiaatorid ja konvektorid. Osa 1: Spetsifikatsioon ja nõuded

Radiators and convectors - Part 1: Technical specifications and requirements

EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 442-1:2000 sisaldab Euroopa standardi EN 442-1:1995 ingliskeelset teksti.	This Estonian standard EVS-EN 442-1:2000 consists of the English text of the European standard EN 442-1:1995.
Standard on kinnitatud Eesti Standardikeskuse 11.01.2000 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 11.01.2000 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

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Descriptors: space heaters, heat radiators, convectors, specifications, mechanical strength, calorific power, marking, labelling

English version

Radiators and convectors - Part 1 : Technical specifications and requirements

Radiateurs et convecteurs - Partie 1 : Spécifications et exigences techniques

Radiatoren und Konvektoren - Teil 1 : Technische Spezifikationen und Anforderungen

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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

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Contents list

Foreword

This European Standard has been prepared by the Technical Committee CEN/TC 130 "Space heating appliances without integral heat sources" of which the secretariat is held by UNI.

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of an identical text or by endorsement, at the latest by June 1996, and conflicting national standard shall be withdrawn at the latest by June 1996.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

0 Introduction

This European Standard of radiators and convectors consists of the following parts:

- Part 1: Technical specifications and requirements
- Part 2: Testing and rating methods
- Part 3: Evaluation of conformity

1 Scope

This European Standard defines the technical specifications and requirements of radiators and convectors to be installed in central heating systems in residential buildings.

Radiators and convectors are components for installation in a permanent manner in construction works.

This European Standard covers radiators and convectors fed with water or steam at temperatures below 120 °C, supplied by a remote heat source.

This European Standard does not apply to independent heating appliances.

This European Standard also defines the additional common data that the manufacturer shall provide to the trade in order to ensure the correct application of the products.

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 442-2:1996	Radiators and convectors - Part 2: Testing and rating methods
EN 573-3	Wrought aluminium and aluminium alloys - Chemical composition and forms of products - Part 3: Chemical composition
EN 10130	Cold rolled low carbon steel flat products for cold forming; Technical delivery conditions
EN 10131	Cold rolled uncoated low carbon and high yield stength steel flat products for cold forming on dimensions shape
EN 45001	General criteria for the operation of testing laboratories

ISO 31-4:1978 Quantities and units - Part 4: Heat

ISO 185: 1988 Grey cast iron - Classification

ISO 2409:1992 Paints and varnishes - Cross-cut test

3 Definitions, symbols and units of measurement

See EN 442-2: 1996.

4 Pretreatment and paint

The pretreatment and paint processes used, shall provide a protective coating to all external surfaces in contact with the air which is:

- to give protection against corrosion in normal storage and installation conditions (as demonstrated by absence of surface corrosion after 100 hours humidity test according to a relevant standard) [1)]

- resistant to minor impact damage as demonstrated by a 2 mm cross-hatch test with a single blade cutting tool manually operated according to ISO 2409:1992.

  The test result shall be within the first three steps (0-1-2) of Table 1 of ISO 2409:1992.

The paint shall emit no odour and no toxic fumes under normal operating conditions.

5 Dimensional tolerances, mechanical strength and stability of the heating appliance

The dimensional tolerances shall not be greater than those in the manufacturer's drawings. In any case they shall not be greater than those given in Table 2 of EN 442-2: 1996.

5.1. Material specification and wall thickness of wet heating surface

The following values for material thickness for steel radiators, tubular radiators and finned tube convectors shall be measured before pressing or fabrication. Wall thickness of cast-iron, cast aluminium or extruded aluminium radiators refer to the nominal drawing dimensions minus all admissible tolerances.

5.1.1 Steel radiators (radiators manufactured from steel sheet or coil)

The wet heating surface materials of steel radiators shall be low carbon steel sheet, which is free from scale or rust and which complies with EN 10130 grade Fe PO1 and with EN 10131.

The thickness of the steel used for wet surfaces shall not be less than 1,11 mm .

1) For example BS 3900 F2 or equivalent standard.