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Fan assisted radiators, convectors and trench convectors - Part 1: Technical specifications and requirements

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 16430-1:2015 sisaldab Euroopa standardi EN 16430-1:2014 ingliskeelset teksti.	This Estonian standard EVS-EN 16430-1:2015 consists of the English text of the European standard EN 16430-1:2014.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
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English Version

Fan assisted radiators, convectors and trench convectors - Part 1: Technical specifications and requirements

Radiateurs assistés par ventilateur, convecteurs et convecteurs de caniveaux - Partie 1 : Spécifications techniques et exigences

Gebläseunterstützte Heizkörper, Konvektoren und Unterflurkonvektoren - Teil 1: Technische Spezifikationen und Anforderungen

This European Standard was approved by CEN on 9 November 2014.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 16430-1:2014) has been prepared by Technical Committee CEN/TC 130 "Space heating appliances without integral heat sources", the secretariat of which 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of an identical text or by endorsement, at the latest by June 2015 and conflicting national standards shall be withdrawn at the latest by June 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

The European Standard "Fan assisted radiators, convectors and trench convectors" consists of the following parts:

- Part 1: Technical specifications and requirements
- Part 2: Test method and rating for thermal output
- Part 3: Test method and rating for cooling capacity

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

1 Scope

This European Standard defines the technical specifications and requirements of fan assisted radiators, convectors and trench convectors for permanent installation in central heating systems which are factory assembled or kits.

This European Standard covers fan assisted radiators and convectors fed with water at temperatures below 120 °C, supplied by a remote heating source.

This European Standard also applies for radiators and convectors according to EN 442-1 to determine their dry cooling capacity.

This European Standard does not apply to discrete heating appliances.

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

This European Standard applies to the testing for the determination of thermal output and dry cooling capacity of

- fan assisted radiators and convectors, provided the heater/cooler has a dedicated fan or fans;
- trench convectors with and without fan(s), provided the fan(s) are dedicated;
- ventilation radiators and convectors (only heating);
- not fan assisted radiators and convectors (only cooling).

2 Normative references

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

EN 442-1, *Radiators and convectors — Part 1: Technical specifications and requirements*

EN 442-2, *Radiators and convectors — Part 2: Test methods and rating*

EN 16430-2, *Fan assisted radiators, convectors and trench convectors — Part 2: Test method and rating for thermal output*

EN 16430-3, *Fan assisted radiators, convectors and trench convectors — Part 3: Test method and rating for cooling capacity*

EN 60335-2-80, *Household and similar electrical appliances — Safety — Part 2-80: Particular requirements for fans*

EN ISO 2409:2013, *Paints and varnishes — Cross-cut test (ISO 2409:2013)*

EN ISO 3741, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Precision methods for reverberation test rooms (ISO 3741)*

EN ISO 3743-1, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering methods for small movable sources in reverberant fields — Part 1: Comparison method for a hard-walled test room (ISO 3743-1)*

EN ISO 3744, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering methods for an essentially free field over a reflecting plane (ISO 3744)*

EN ISO 3745, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Precision methods for anechoic rooms and hemi-anechoic rooms (ISO 3745)*

EN ISO 9614-1, *Acoustics — Determination of sound power levels of noise sources using sound intensity — Part 1: Measurement at discrete points (ISO 9614-1)*

EN ISO 9614-2, *Acoustics — Determination of sound power levels of noise sources using sound intensity — Part 2: Measurement by scanning (ISO 9614-2)*

EN ISO 12499, *Industrial fans — Mechanical safety of fans — Guarding (ISO 12499)*

EN ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories (ISO/IEC 17025)*

IEC 62301, *Household electrical appliances — Measurement of standby power*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 442-2, EN 16430-2 and EN 16430-3 apply.

4 Pretreatment and coating

The pretreatment, paint processes and other surface finishing (chrome, polish etc.) used, shall provide a protective coating to all external surfaces in contact with the air which shall as a minimum requirement:

- give protection against corrosion in normal storage and installation conditions, as demonstrated by absence of surface corrosion after 100 h humidity test according to EN 442-2;
- for paint only, be resistant to minor impact damage according to EN ISO 2409. The test result shall be within the first three steps (0-1-2) of EN ISO 2409:2013, Table 1.

The surface treatments shall not contain any chemical substances whose use is prohibited in building products¹. The compliance shall be declared by the manufacturer of the radiator/convector.

5 Dimensional tolerances and pressure tightness

5.1 General

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 EN 442-2. For trench convectors the dimensional tolerances of finned tube convectors apply. The dimensional tolerance of the trench shall not be greater than those given in Table 1.

¹ Also in relation to Regulation (EC) No 1907/2006 (REACH)