

Nederlandse norm

NEN-EN 16430-2

(en)

Met behulp van een ventilator werkende radiatoren, convectoren en putconvectoren - Deel 2: Beproevingmethoden en classificatie voor warmtevermogen

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

Vervangt NEN-EN 16430-2:2012 Ontw.

ICS 91.140.10
januari 2015

Als Nederlandse norm is aanvaard:
 - EN 16430-2:2014, IDT

Preview

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Nederlands voorwoord

Voor de in deze norm vermelde normatieve verwijzingen bestaan in Nederland de volgende equivalenten:

| <u>vermelde norm</u> | <u>Nederlandse norm</u> | <u>titel</u> |
|----------------------|-------------------------|---|
| EN 442-2 | NEN-EN 442-2 | Radiatoren en convectoren - Deel 2: |
| EN 636 | NEN-EN 636 | Beproevingmethoden en opgave van de prestatie |
| EN ISO/IEC 17025 | NEN-EN-ISO/IEC 17025 | Triplex - Specificaties |
| | | Algemene eisen voor de bekwaamheid van |
| | | beproeving- en kalibratielaboratoria |

Voorbeeld
Preview

Voorbeeld
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ICS 91.140.10

English Version

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

Radiateurs assistés par ventilateur, convecteurs et convecteurs de caniveaux - Partie 2: Méthode d'essais et d'évaluation de la puissance thermique

Gebälseunterstützte Heizkörper, Konvektoren und Unterflurkonvektoren - Teil 2: Prüfverfahren und Bewertung der Wärmeleistung

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

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Preview
 NEN
 2015

Foreword

This document (EN 16430-2:2014) 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of an identical text or by endorsement, at the latest by June 2015 and conflicting national standards shall be withdrawn at the latest by June 2015.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.

Preview

PRELIMINARY DRAFT

EN 16430-2:2014 (E)**1 Scope**

This European Standard applies to the thermal output testing of fan assisted radiators, convectors and trench convectors which are factory assembled or kits, i.e.

- fan assisted radiators and convectors, provided the heater has a dedicated fan or fans;
- trench convectors with and without fan(s), provided the heater and the fan(s) are dedicated;
- ventilation radiators and convectors.

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

EN 636, *Plywood - Specifications*

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

3 Terms and definitions

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

3.1 trench convectors
convectors installed in a trench in the floor mostly in front of glass facades, including the covering of the trench

3.2 fan assisted radiators and convectors
radiators and convectors according to EN 442-2 and trench convectors according to 3.1 equipped with fans to increase the convective thermal output/ cooling capacity of the radiator, convector or trench convector

3.3 ventilation radiators and convectors
radiators or convectors, which, apart from heating rooms normally, also heat the incoming air (outside air)

Note 1 to entry: In this context, the air is led directly to the radiator and, once heated by the radiator, fed to the room. The controlled air feed is performed mechanically, either using a fan in the primary air system or through an exhaust air system.

3.4 primary air unit
unit connected to the radiator, convector or trench convector which supplies primary air to the room, preheated or pre-cooled by the radiator, convector or trench convector

3.5 basic units
regularly repeated sections of the radiator/convector equipped with fans

3.6 extension units
parts of the fan assisted radiator/convector in addition to the basic units which are not equipped with a fan

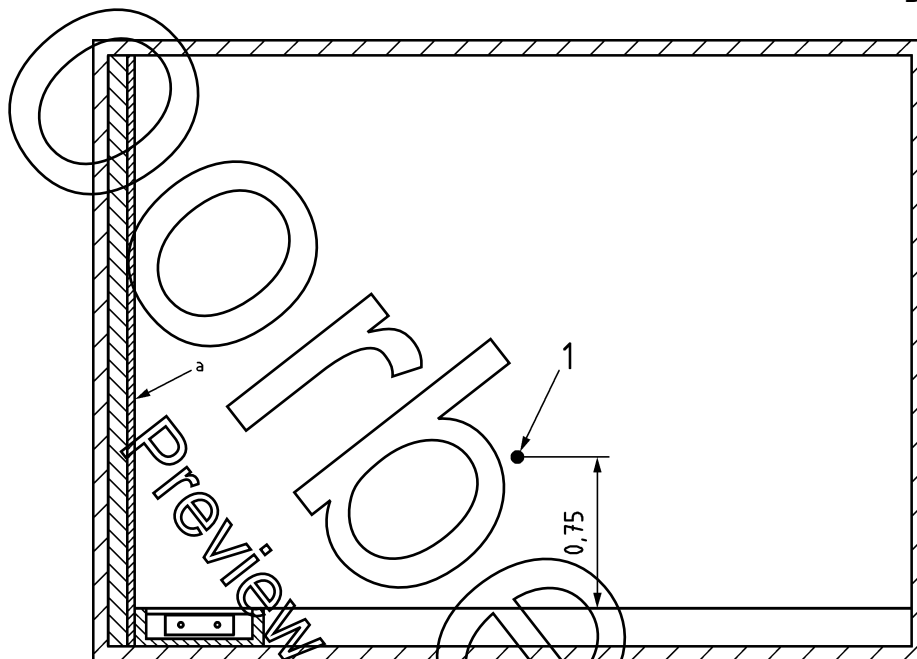
4 Radiators and convectors with fan(s) and trench convectors with and without fan(s)

4.1 Preparation of the closed test room

4.1.1 Trench convectors

The back wall of the test room shall be cooled to a surface temperature of $16\text{ °C} \pm 0,5\text{ K}$ during the test (see Figure 1). This can be done either by the back wall itself or by a flat cooling surface (emission coefficient has to be at least 0,9) covering the whole width and height of the room placed in front of the back wall of the closed test room in accordance with EN 442-2. The space between the cooling plate and the booth back wall shall be closed off to prevent air from flowing through.

Dimensions in metres



Key

- a cooling surface, temperature $16\text{ °C} \pm 0,5\text{ K}$
- 1 reference air temperature t_r

Figure 1 — Positioning of the cooling surface in the test room

The trench convector with its associated trench and the intended covering is installed in the booth floor in front of this cooling surface, flush with the finished floor level, in accordance with the manufacturer's instructions. Unless other dimensions have been given by the manufacturer, the distance between the trench and the cooled back wall shall be 0,05 m (see Figure 2). For the purposes of the test, the trench in itself is covered with a thermal insulation shown in Figure 2 which has a thermal resistance of at least $R = 1,0\text{ m}^2\text{K/W}$.

If the floor of the test booth is cooled then the floor has to have a thermal resistance of at least $R = 2,5\text{ m}^2\text{K/W}$.

If the floor of the test booth is not cooled then there is no requirement for such a thermal resistance.

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