Ventilation for buildings - Air terminal devices - Aerodynamic testing and rating for displacement flow applications

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EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 12239:2002 sisaldab Euroopa standardi EN 12239:2001 ingliskeelset teksti. Käesolev dokument on jõustatud 14.02.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 12239:2002 consists of the English text of the European standard EN 12239:2001. This document is endorsed on 14.02.2002 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This European Standard specifies methods for the laboratory aerodynamic testing and rating of low velocity air terminal devices for displacement flow applications, including the specification of suitable test facilities and measurement techniques. The standard gives only tests for the assessment of characteristics of the air terminal devices under isothermal conditions.	**Scope:** This European Standard specifies methods for the laboratory aerodynamic testing and rating of low velocity air terminal devices for displacement flow applications, including the specification of suitable test facilitiesand measurement techniques. The standard gives only tests for the assessment of characteristics of the air terminal devices under isothermal conditions.

ICS 91.140.30

Võtmesõnad: aerodynamics, definitions, displacement flow, evaluations, gas permeability, laboratory testing, measuring techniques, mechanical engineering, methods, passages, pressure, service installations in buildings, testing, thermal environment systems, use, ventilation

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English version

Ventilation for buildings - Air terminal devices - Aerodynamic testing and rating for displacement flow applications

Ventilation des bâtiments - Bouches d'air - Essais aérodynamiques et caractérisation pour applications déplacement d'air

Lüftung von Gebäuden - Luftdurchlässe - Aerodynamische Prüfung und Bewertung für Anwendung bei Verdrängungsströmung

This European Standard was approved by CEN on 22 June 2001.

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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 Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 156 "Ventilation for buildings", the secretariat of which is held by BSI.

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 February 2002, and conflicting national standards shall be withdrawn at the latest by February 2002.

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.

1 Scope

This European Standard specifies methods for the laboratory aerodynamic testing and rating of low velocity air terminal devices for displacement flow applications, including the specification of suitable test facilities and measurement techniques.

The standard gives only tests for the assessment of characteristics of the air terminal devices under non-isothermal conditions.

This standard applies to Class IV air terminal devices as defined in EN 12238.

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 the 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 (including amendments).

EN 12238, *Ventilation for buildings — Air terminal devices — Aerodynamic testing and rating for mixed flow applications*

prEN 13182:1998, *Ventilation for buildings — Instrumentation requirements for air velocity measurements in ventilated spaces*

EN ISO 5167-1 *Measurement of fluid flow by means of pressure differential devices Part 1: Orifice plates, nozzles and Venturi tubes inserted in circular cross-section conduits running full (ISO 5167-1:1991)*

CR 12792, *Ventilation for buildings — Symbols and terminology*

ISO 5221, *Air distribution and air diffusion - Rules to methods of measuring air flow rate in an air handling duct*

3 Terms, definitions and symbols

3.1 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in CR 12792, together with the following, apply.

3.1.1
low velocity air terminal device
an air terminal device which is designed for thermally controlled ventilation e.g. displacement flow applications

3.1.2
primary air flow rate q_p
volume of air entering the air terminal device in unit time from an upstream duct