National Standards Authority of Ireland

IRISH STANDARD

I.S. EN 14277:2006

ICS 91.140.30

VENTILATION FOR BUILDINGS - AIR TERMINAL DEVICES - METHOD FOR AIRFLOW MEASUREMENT BY CALIBRATED SENSORS IN OR CLOSE TO ATD/PLENUM BOXES

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EUROPEAN STANDARD

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English Version

Ventilation for buildings - Air terminal devices - Method for airflow measurement by calibrated sensors in or close to ATD/plenum boxes

Systèmes de ventilation pour les bâtiments - Bouches d'air - Méthode de mesure du débit d'air à l'aide de capteurs étalonnés dans ou à proximité des boîtes type bouche/plénum

Lüftung von Gebäuden - Luftdurchlässe - Verfahren zur Messung des Luftstroms durch kalibrierte Fühler in oder in der Nähe von Luftdurchlässen/Überdruckkammern

This European Standard was approved by CEN on 7 July 2006.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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Foreword

This document (EN 14277:2006) 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of an identical text or by endorsement, at the latest by March 2007, and conflicting national standards shall be withdrawn at the latest by March 2007.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

This European Standard specifies methods for the laboratory aerodynamic testing and rating of the air flow rate measurement accuracy of fixed air flow rate measurement devices, including supply and exhaust air terminal devices (ATD) and in-duct measurement stations (IMS) and the sensitivity of such devices to flow disturbance. A general overview of different test configurations is shown in Figure 1.

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

EN 12792:2003, *Ventilation for buildings — Symbols, terminology and graphical symbols*

EN ISO 5167-1, *Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full — Part 1: General principles and requirements (ISO 5167-1:2003)*

EN ISO 5167-2, *Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full — Part 2: Orifice plates (ISO 5167-2:2003)*

EN ISO 5167-3, *Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full — Part 3: Nozzles and Venturi nozzles (ISO 5167-3:2003)*

EN ISO 5167-4, *Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full — Part 4: Venturi tubes (ISO 5167-4:2003)*

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