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Ventilation for buildings - Measurement of air flow rates on site - Methods

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English Version

Ventilation for buildings - Measurement of air flow rates on site - Methods

Ventilation des bâtiments - Mesurages des débits d'air
sur site - MéthodesLüftung von Gebäuden - Luftvolumenstrommessung in
Lüftungssystemen - Verfahren

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European foreword

This document (EN 16211:2024) 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of an identical text or by endorsement, at the latest by May 2025, and conflicting national standards shall be withdrawn at the latest by May 2025.

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

This document supersedes EN 16211:2015.

In addition to a number of editorial revisions, the main changes compared with EN 16211:2015 are as follows:

- the whole document has been rearranged;
- the method described previously in EN 12599:2012 to measure air (volume) flow rate in ductwork has been included;
- the tracer gas method has been moved in Annex A (informative);
- two new methods to measure air flow rate at exhaust and intake grille have been added in Annex A (informative);
- parts dealing with uncertainty have been replaced by Annex B (informative);
- requirements on measuring devices are now expressed in MPME (maximum permissible measurement error).

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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

Introduction

Measurement of the air (volume) flow rate in a ventilation system is of general interest that is not related to a specific operation or stage (e.g. installation, inspection, commissioning or handover). It was therefore agreed to take advantage of the simultaneous revision of EN 16211:2015 and EN 12599:2012 to address this subject in a single document (EN 16211:2024) rather than scattering or repeating it in various documents.

In this document, all types of measurements are air (volume) flow rate. For the sake of readability, the term "air (volume) flow rate" is replaced in the text by the contracted term "air flow rate".

EN 16211:2024 (E)

1 Scope

This document specifies methods for the measurement of air flow rates on site. It provides a description of the air flow rate measurement methods and how measurements are performed within the margins of stipulated method uncertainties. It gives the necessary measurement conditions (e.g. length of straight duct, uniform velocity profile) to achieve the stipulated measurement uncertainties.

The methods for measuring the air flow rate inside ducts do not apply to:

- ducts that are not circular or rectangular (e.g. oblong ducts);
- flexible ducts.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 12792, *Ventilation for buildings — Symbols, terminology and graphical symbols*

EN 14277, *Ventilation for buildings — Air terminal devices — Method for airflow measurement by calibrated sensors in or close to ATD/plenum boxes*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN