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Heat recovery ventilators and energy recovery ventilators — Method of test for performance

Part 2: Assessment of measurement uncertainty of performance parameters

bsi.

National foreword

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 86, *Refrigeration and air-conditioning*, Subcommittee SC 6, *Testing and rating of air-conditioners and heat pumps*.

A list of all parts in the ISO 16494 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document is intended to be a practical guide to assist laboratory personnel in evaluating the uncertainties in the measurement of the performance of ventilators falling under the scope of ISO 16494:2014. It contains a brief introduction to the theoretical basis for the calculations, and contains examples of uncertainty budget sheets that can be used as a basis for the determination of the uncertainty of measurement.

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TECHNICAL REPORT **ISO/TR 16494-2:2019**

Heat recovery ventilators and energy recovery ventilators — Method of test for performance —

Part 2: Assessment of measurement uncertainty of performance parameters

1 Scope

This document provides guidance for practical applications of those principles in the measurement of the performance of ventilators falling under the scope of ISO 16494:2014. The references listed in the Bibliography give detailed information on the principles and theory of uncertainty as applied to measurements.

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.

ISO 16494, *Heat recovery ventilators and energy recovery ventilators — Method of test for performance*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 16494 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

3.1
calibration
operation that, under specified conditions, in a first step establishes a relation between the quantity values with measurement uncertainties provided by measurement standards and corresponding indications with associated measurement uncertainties and, in a second step, uses this information to establish a relation for obtaining a measurement result from an indication

3.2
correction
modification applied to a measured quantity value to compensate for a known systematic effect

3.3
instrumental drift
continuous change in an indication, related neither to a change in the quantity being measured nor to a change of any recognized influence quantity

