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Fans — Air curtain units —

Part 2:

Laboratory methods of testing for sound power

Ventilateurs — Rideaux d'air —

*Partie 2: Méthodes d'essai en laboratoire des niveaux de puissance
acoustique*



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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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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 117, *Fans*.

ISO 27327 consists of the following parts, under the general title *Fans — Air curtain units*:

- *Part 1: Laboratory methods of testing for aerodynamic performance rating*
- *Part 2: Laboratory methods of testing for sound power*

The following parts are under preparation:

- *Part 3: Test method to determine energy effectiveness* [Technical Report]

This corrected version of ISO 27327-2:2014 incorporates the following correction:

- the sentence "This first edition of ISO 27327-2:2014 cancels and replaces ISO 13347-1:2004 and ISO 13347-2:2004" has been removed from the Foreword.

Introduction

The need for this part of ISO 27327 has been evident for some time. While a number of national standards exist for the measurement of fan noise, none addressed the particular considerations required for the noise testing of air curtain units.

Forming part of the ISO/TC 117 series of fan standards, this part of ISO 27327 deals with the determination of the air curtain unit sound power level appropriate to a particular application. In describing the test and rating procedures, numerous references are made to ISO 5801 and ISO 13347, as well as to other ISO standards.

The test procedures described in this part of ISO 27327 relate to laboratory conditions. The measurement of performance under site conditions is not included. Acoustic system effects can be considerable where the airflow into and out of the air curtain unit is not free from swirl nor fully developed.

This part of ISO 27327 describes methods for determining sound power levels of air curtain units in one-third-octave bandwidths and one-octave bandwidths.

Data obtained in accordance with this part of ISO 27327 can be used for the following purposes, amongst others:

- a) comparison of air curtain units which are similar in size and type;
- b) comparison of air curtain units which are different in size, type, design, speed, etc.;
- c) determining whether an air curtain unit is suitable for a specified upper limit of sound emission;
- d) scaling air curtain unit noise from one size and speed to another size and speed of the same type of air curtain unit;
- e) prediction of sound pressure level in application of the air curtain unit;
- f) engineering work to assist in developing machinery and equipment with lower sound emissions.