



ISO 13347-4

Fans — Determination of fan sound power levels under standardized laboratory conditions —

Part 4:
Sound intensity method

Ventilateurs industriels — Détermination des niveaux de puissance acoustique des ventilateurs dans des conditions de laboratoire standardisées —

Partie 4: Méthode de l'intensité acoustique

**Second edition
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This document was prepared by Technical Committee ISO/TC 117, *Fans*.

This second edition cancels and replaces the first edition (ISO 13347-4:2004), which has been technically revised. It also incorporates the Technical Corrigendum ISO 13347-4:2004/Cor 1:2006.

The main changes are as follows:

- inclusion of acoustic methods for installation category E fans;
- symbols harmonized with those used in ISO 5801 and other ISO standards listed as normative references [2];
- closer alignment with the superordinate ISO 9614 series relating to sound intensity measurement;
- editorial revisions.

A list of all parts in the ISO 13347 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.

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This document establishes a method for determining the sound power level of a fan. The method is reproducible in all laboratories which are qualified according to the requirements of this document.

The method specified in this document employs standard sound measurement instrumentation. The test set-ups are generally designed to represent the physical orientation of a fan as installed, in accordance with ISO 5801 or ISO 13350.

Since sound power levels are considered independent of the acoustic environment around the fan, a good comparison can be made between two or more fans proposed for any specific air performance condition. Moreover, these values establish an accurate base for estimating the acoustical outcome of the fan installation in terms of sound pressure levels. A successful estimate of sound pressure levels requires extensive information on the fan and the environment in which it is to be located.

It is often advantageous for the equipment user to employ acoustical consultation to ensure that all factors which affect the final sound pressure levels are considered. More detailed information on the complexity of this situation may be found in acoustic textbooks.

This document has been developed in response to the need for a reliable and accurate enveloping surface method for determining the sound power levels of fan equipment. Where possible, it has been based on existing National standards and combines state-of-the-art with practical considerations.

NOTE The bibliography contains further references for those wishing to explore this subject in greater detail (see References [1] to [Z]).