

INTERNATIONAL
STANDARD
100

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Acoustics — Test code for the measurement of airborne noise emitted by rotating electrical machines

*Acoustique — Code d'essai pour le mesurage du bruit aérien émis par les
machines électriques tournantes*



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 1680 was prepared by Technical Committee ISO/TC 43, *Acoustics*, Subcommittee SC 1, *Noise*.

This first edition of ISO 1680 cancels and replaces ISO 1680-1:1986 and ISO 1680-2:1986, which have been combined and technically revised.

Annexes A and B of this International Standard are for information only.

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Introduction

This International Standard is a noise test code giving methods for determining the airborne sound radiation of rotating electrical machines operating under steady-state conditions.

To characterize the airborne sound radiation, procedures are given to determine sound power levels and additionally emission sound pressure levels, if required. Furthermore, requirements are given for the declaration and verification of noise emission values.

Basic standards giving methods for determining sound power levels are as follows:

- a) using sound pressure:
 - grade 1 (precision): ISO 3741 and ISO 3745;
 - grade 2 (engineering): ISO 3743-1, ISO 3743-2, ISO 3744, ISO 3747;
 - grade 3 (survey): ISO 3746;
- b) using sound intensity:
 - all grades: ISO 9614-1;
 - grades 2 and 3: ISO 9614-2.

The emission sound pressure level is determined on the basis of ISO 11203. Declaration and verification of noise emission values follow ISO 4871.

This International Standard has been drafted in accordance with ISO 12001.