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**Acoustics — Determination of sound power levels of noise from air-terminal devices, air-terminal units, dampers and valves by measurement in a reverberation room**

*Acoustique — Détermination des niveaux de puissance acoustique du bruit émis par les bouches d'air, les unités terminales, les registres et clapets au moyen de mesurages en salle reverbérante*



## Foreword

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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 5135 was prepared by ISO/TC 43, *Acoustics*, Subcommittee SC 1, *Noise*.

This second edition cancels and replaces the first edition (ISO 5135:1984), of which it constitutes a technical revision.

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## Introduction

This International Standard defines requirements for acoustic testing in reverberation rooms of the type of equipment listed in clause 1. It is based on the use of ISO 3741, which describes the acoustic test facilities, instrumentation and procedures to be used for precision grade determination of sound power levels in octave or one-third-octave bands of a noise source.

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## 1 Scope

This International Standard establishes general rules for the acoustic testing of air-terminal units, dampers and valves used in air diffusion and air distribution systems as defined in ISO 3258 in order to determine sound power levels as defined in ISO 3740.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 3258:1976, *Air distribution and air diffusion — Vocabulary*.

ISO 3740:1980, *Acoustics — Determination of sound power levels of noise sources — Guidelines for the use of basic standards and for the preparation of noise test codes*.

ISO 3741:—<sup>1)</sup>, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Precision methods for reverberation rooms*.

ISO 5219:1984, *Air distribution and air diffusion — Laboratory aerodynamic testing and rating of air terminal devices*.

ISO 5220:1981, *Air distribution and air diffusion — Aerodynamic testing and rating of constant and variable dual or single duct boxes and single duct units*.

## 3 Definitions

For the purposes of this International Standard, the following definitions apply.

### 3.1

#### sound pressure level

$L_p$

ten times the logarithm to the base 10 of the ratio of the mean-square sound pressure of a sound to the square of the reference sound pressure, in decibels

NOTE — The reference sound pressure is 20  $\mu\text{Pa}$ .

<sup>1)</sup> To be published. (Revision of ISO 3741:1988 and ISO 3742:1988)