

STANDARD

10053

First edition
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**Acoustics — Measurement of office screen
sound attenuation under specific laboratory
conditions**

*Acoustique — Mesurage, dans des conditions de laboratoire spécifiques,
de l'affaiblissement acoustique apporté par les écrans utilisés dans les
bureaux*



Reference number
ISO 10053:1991(E)

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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.

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 10053 was prepared by Technical Committee ISO/TC 43, *Acoustics*, Sub-Committee SC 2, *Building acoustics*.

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

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Acoustics — Measurement of office screen sound attenuation under specific laboratory conditions

1 Scope

This International Standard gives a method for measuring the sound attenuation of screens intended for use in rooms to increase speech privacy or noise insulation between working positions.

Screen sound attenuation measured according to this International Standard is intended to be used to classify screens.

NOTE 1 Field conditions will, as a rule, deviate from the conditions specified in this method. Reflections from ceilings and walls can considerably lower the apparent screen sound attenuation.

The classification obtained according to this International Standard is not valid in those practical situations where the source is situated close to the floor. The directivity of the actual sound source and the sound transmission properties of the screen produce results that differ from those obtained by use of the method given in this International Standard.

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 3745:1977, *Acoustics — Determination of sound power levels of noise sources — Precision methods for anechoic and semi-anechoic rooms*.

IEC 225:1966, *Octave, half-octave and third-octave band filters intended for the analysis of sounds and vibrations*.

IEC 651:1979, *Sound level meters*.

IEC 804:1985, *Integrating-averaging sound level meters*.

3 Definitions

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

3.1 screen, screen element: Partial height space divider that is intended for use in large rooms without partitions. A screen may consist of several screen elements coupled together.

3.2 screen sound attenuation: Sound attenuation measured according to this International Standard. The quantity is denoted by ΔL_s . For a screen with no air gap at the floor, ΔL_s is an approximation of the insertion loss that would have been obtained in a free field with a corresponding screen of infinite width and semi-infinite height.

4 Equipment

The measurement equipment shall comply with IEC 651 for a type 1 sound level meter. Integrating sound level meters shall comply with IEC 804. The microphone diameter shall have a maximum dimension of 13 mm (1/2 in). The filters shall comply with IEC 225.

If the loudspeaker contains multiple loudspeaker elements, their axes shall coincide.

It is essential that the directivity of the loudspeaker lies within one of the ranges given in table 1 when excited with pink noise and measured in octave bands.