
**Acoustics — Determination of sound
insulation performance of cabins —
Laboratory and *in situ* measurements**

*Acoustique — Détermination des performances d'isolation acoustique des
cabines — Mesurages en laboratoire et in situ*

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Contents	Page
1 Scope	1
2 Normative references	1
3 Definitions	1
4 Test environment and choice of suitable quantity	2
5 Instrumentation	3
6 Measurement of sound insulation performance in the laboratory..	3
6.1 General	3
6.2 Cabin location	3
6.3 Cabin mounting and conditions	3
6.4 Measurement of the sound pressure level in the room	4
6.5 Measurement of the sound pressure level inside the cabin	4
6.6 Sound pressure insulation, D_p	4
6.7 Measurement of noise inside the cabin due to noise sources forming an integral part of the cabin (internal noise level, L_{pA})	5
7 Measurement of sound insulation performance <i>in situ</i>	5
7.1 General	5
7.2 External sound field	5
7.3 Cabin mounting and conditions	6
7.4 Microphone positions in the room	6
7.5 Microphone positions inside the cabin	6
7.6 Apparent sound pressure insulation, D'_p	6
7.7 Measurement of noise inside the cabin due to noise sources forming an integral part of the cabin (internal noise level, L_{pA})	7

8	Weighted sound pressure insulation.....	7
9	Estimated cabin noise insulation for a specific noise spectrum.....	7
10	Uncertainty.....	7
11	Information to be recorded.....	7
11.1	Test object	7
11.2	Test conditions	8
11.3	Instrumentation	8
11.4	Acoustical data	8
11.5	Further information	8
12	Information to be reported	8
Annexes		
A	Estimated cabin noise insulation for a specific noise spectrum.....	10
B	Bibliography	11

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 11957 was prepared by Technical Committee ISO/TC 43, *Acoustics*, Subcommittee SC 1, *Noise*, on request from CEN/TC 211, *Acoustics*.

Related standards concern noise attenuation measurements of enclosures under laboratory conditions (ISO 11546-1) and *in situ* (ISO 11546-2).

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

Acoustics — Determination of sound insulation performance of cabins — Laboratory and *in situ* measurements

1 Scope

This International Standard specifies a laboratory method (clause 6) and *in situ* methods (clause 7) for the determination of the sound insulation performance of sound-protecting cabins. The sound insulation performance is the reduction in sound pressure level or sound power level afforded by the cabin. The methods are applicable to cabins with a small leak ratio ($\theta \leq 2\%$).

This International Standard is applicable to a complete cabin only and not to the individual components from which it is made.

NOTE 1 Sound insulations for cabin components such as wall elements, doors, windows, silencers, etc. should be measured according to other relevant standards.

Requirements for the test environment in the laboratory are based on those given in ISO 3741.

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 717-1:—¹⁾, *Acoustics — Rating of sound insulation in buildings and of building elements — Part 1: Airborne sound insulation*.

ISO 3741:—²⁾, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Precision methods for reverberation rooms*.

ISO 4871:1996, *Acoustics — Declaration and verification of noise emission values of machinery and equipment*.

IEC 651:1979, *Sound level meters*.

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

IEC 942:1988, *Sound calibrators*.

IEC 1260:1995, *Electroacoustics — Octave-band and fractional-octave-band filters*.

3 Definitions

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

3.1 A-weighting: Frequency weighting in accordance with IEC 651.

3.2 cabin: An enclosure specially designed to shield human beings from environmental noise.

1) To be published. (Revision of ISO 717-1:1982)

2) To be published. (Revision of ISO 3741:1988 and ISO 3742:1988)