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Irish Standard  
I.S. EN ISO 11957:2009

# Acoustics - Determination of sound insulation performance of cabins - Laboratory and in situ measurements (ISO 11957:1996)

## I.S. EN ISO 11957:2009

*Incorporating amendments/corrigenda issued since publication:*

<i>This document replaces:</i> EN ISO 11957:1996	<i>This document is based on:</i> EN ISO 11957:2009 EN ISO 11957:1996	<i>Published:</i> 19 August, 2009 7 October, 1997
This document was published under the authority of the NSAI and comes into effect on: 21 September, 2009		ICS number: 17.140.01
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<b>Price Code:</b> G		
Údarás um Chaighdeáin Náisiúnta na hÉireann		

I.S. EN ISO 11957:2009

EUROPEAN STANDARD

EN ISO 11957

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2009

ICS 17.140.01

Supersedes EN ISO 11957:1996

English Version

## Acoustics - Determination of sound insulation performance of cabins - Laboratory and in situ measurements (ISO 11957:1996)

Acoustique - Détermination des performances d'isolation  
acoustique des cabines - Mesurages en laboratoire et in  
situ (ISO 11957:1996)

Akustik - Messung der Schalldämmung von  
Schallschutzkabinen - Messungen im Labor und im  
Einsatzfall (ISO 11957:1996)

This European Standard was approved by CEN on 3 August 2009.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

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## **Foreword**

The text of ISO 11957:1996 has been prepared by Technical Committee ISO/TC 43 "Acoustics" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 11957:2009 by Technical Committee CEN/TC 211 "Acoustics" the secretariat of which is held by DS.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2010, and conflicting national standards shall be withdrawn at the latest by January 2010.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 11957:1996.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EC Directives.

For relationship with EC Directives, see informative Annexes ZA and ZB, which are integral parts of this document.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

### **Endorsement notice**

The text of ISO 11957:1996 has been approved by CEN as a EN ISO 11957:2009 without any modification.

## **Annex ZA** (informative)

### **Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC**

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive 98/37/EC, amended by 98/79/EC on machinery.

Once this standard is cited in the Official Journal of the European Communities under that Directive and has been implemented as a national standard in at least one Member State, compliance with the normative clauses of this standard confers, within the limits of the scope of this standard, a presumption of conformity with the relevant Essential Requirements of that Directive and associated EFTA regulations.

**WARNING** - Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

## **Annex ZB** (informative)

### **Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC**

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive 2006/42/EC on machinery.

Once this standard is cited in the Official Journal of the European Communities under that Directive and has been implemented as a national standard in at least one Member State, compliance with the normative clauses of this standard confers, within the limits of the scope of this standard, a presumption of conformity with the relevant Essential Requirements of that Directive and associated EFTA regulations.

**WARNING —** Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

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I.S. EN ISO 11957:2009

# INTERNATIONAL STANDARD

**ISO**  
**11957**

First edition  
1996-12-01

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## **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*



Reference number  
ISO 11957:1996(E)

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International Organization for Standardization

Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

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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 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.

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

ISO 3741:—<sup>2)</sup>, *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*.

## 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.

## 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)

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