



**SLOVENSKI STANDARD**  
**SIST EN ISO 11821:1999**

**01-november-1999**

---

**Akustika - Merjenje zvočnega dušenja odstranljivih zaslonov na mestu postavitve  
(ISO 11821:1997)**

Acoustics - Measurement of the in situ sound attenuation of a removable screen (ISO 11821:1997)

Akustik - Messung der Schalldämpfung von versetzbaren Schallschirmen im Einsatzfall  
(ISO 11821:1997)

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

Acoustique - Mesurage d l'atténuation acoustique in situ d'un écran amovible (ISO 11821:1997)

[SIST EN ISO 11821:1999](https://standards.iteh.ai/catalog/standards/sist/f878255c-e75f-4a3c-aedf-6c8e6154e250/sist-en-iso-11821-1999)

[https://standards.iteh.ai/catalog/standards/sist/f878255c-e75f-4a3c-aedf-](https://standards.iteh.ai/catalog/standards/sist/f878255c-e75f-4a3c-aedf-6c8e6154e250/sist-en-iso-11821-1999)

[6c8e6154e250/sist-en-iso-11821-1999](https://standards.iteh.ai/catalog/standards/sist/f878255c-e75f-4a3c-aedf-6c8e6154e250/sist-en-iso-11821-1999)

**Ta slovenski standard je istoveten z: EN ISO 11821:1997**

---

**ICS:**

17.140.01	Akustična merjenja in blaženje hrupa na splošno	Acoustic measurements and noise abatement in general
-----------	--	---

**SIST EN ISO 11821:1999**

**en**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN ISO 11821:1999](https://standards.iteh.ai/catalog/standards/sist/f878255c-e75f-4a3c-aedf-6c8e6154e250/sist-en-iso-11821-1999)

<https://standards.iteh.ai/catalog/standards/sist/f878255c-e75f-4a3c-aedf-6c8e6154e250/sist-en-iso-11821-1999>

EUROPEAN STANDARD

EN ISO 11821

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 1997

ICS 17.140.99

Descriptors: See ISO document

English version

Acoustics - Measurement of the in situ sound  
attenuation of a removable screen  
(ISO 11821:1997)

Acoustique - Mesurage de l'atténuation  
acoustique in situ d'un écran amovible  
(ISO 11821:1997)

ITh STANDARD PREVIEW  
(standards.iteh.ai)

Akustik - Messung der Schalldämpfung von  
versetzbaren Schallschirmen im Einsatzfall  
(ISO 11821:1997)

[SIST EN ISO 11821:1999](https://standards.iteh.ai/catalog/standards/sist/f878255c-e75f-4a3c-aedf-6c8e6154e250/sist-en-iso-11821-1999)

<https://standards.iteh.ai/catalog/standards/sist/f878255c-e75f-4a3c-aedf-6c8e6154e250/sist-en-iso-11821-1999>

This European Standard was approved by CEN on 1997-03-03. 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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

## CEN

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

**Foreword**

The text of the International Standard ISO 11821:1997 has been prepared by Technical Committee ISO/TC 43 "Acoustics" in collaboration with 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 October 1997, and conflicting national standards shall be withdrawn at the latest by October 1997.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

**Endorsement notice**

The text of the International Standard ISO 11821:1997 was approved by CEN as a European Standard without any modification.

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**



ALINEVO 10 ANUGUEN  
SIST EN ISO 11821:1999  
<https://standards.iteh.ai/catalog/standards/sist/f8255c-e75f-4a3c-aedf-6c8e6154e250/sist-en-iso-11821-1999>

0001 -ff-

..... 7010  
EVICALSACI KOTIMU ON TIVIMIQ



# INTERNATIONAL STANDARD

**ISO  
11821**

First edition  
1997-04-01

---

---

## **Acoustics — Measurement of the *in situ* sound attenuation of a removable screen**

*Acoustique — Mesurage de l'atténuation acoustique in situ d'un écran  
amovible*

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN ISO 11821:1999](https://standards.iteh.ai/catalog/standards/sist/f878255c-e75f-4a3c-aedf-6c8e6154e250/sist-en-iso-11821-1999)

<https://standards.iteh.ai/catalog/standards/sist/f878255c-e75f-4a3c-aedf-6c8e6154e250/sist-en-iso-11821-1999>



Reference number  
ISO 11821:1997(E)

## ISO 11821:1997(E)

## Contents

Page

1	Scope .....	1
2	Normative references .....	2
3	Definitions .....	2
4	Instrumentation .....	3
5	Determination of <i>in situ</i> sound attenuation .....	3
6	Uncertainty .....	7
7	Information to be recorded .....	8
8	Information to be reported .....	9

## Annex

A	Bibliography .....	10
---	--------------------	----

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN ISO 11821:1999

<https://standards.iteh.ai/catalog/standards/sist/f878255c-e75f-4a3c-aedf-6c8e6154e250/sist-en-iso-11821-1999>

© ISO 1997

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Organization for Standardization  
Case postale 56 • CH-1211 Genève 20 • Switzerland  
Internet central@iso.ch  
X.400 c=ch; a=400net; p=iso; o=isocs; s=central

Printed in Switzerland

## 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.

iTeh STANDARD PREVIEW

International Standard ISO 11821 was prepared by Technical Committee ISO/TC 43, *Acoustics*, Subcommittee SC 1, *Noise*.

Annex A of this International Standard is for information only.

<https://standards.iteh.ai/catalog/standards/sist/f878255c-e75f-4a3c-aedf-6c8e6154e250/sist-en-iso-11821-1999>

## Introduction

This International Standard specifies *in situ* methods for the determination of the sound attenuation performance of removable sound-protecting screens for industrial purposes. A screen is any object (e.g. panels, flexible curtains, etc.) breaking the line of sight between source and receiver; such a screen may be flat or curved. A removable screen is a screen that can be dismantled without the other environmental conditions being changed. The purpose of such a screen is to shield a work station or a complete work area from the noise emitted by sound source(s). Such an area can be a zone where one operator is located or a zone occupied by several operators at no fixed positions. For example, screens can be used by a maintenance unit to reduce the effect of noise at a given location, from repair work, and to reduce the noise at a work station located close to a machine or process.

Related standards concern noise attenuation measurements of enclosures under *in situ* conditions (ISO 11546-2), and sound insulation measurements of cabins under *in situ* conditions (ISO 11957).

Other International Standards dealing with screens in other situations are ISO 10053 (sound attenuation of screens for open plan offices) and ISO 10847 (sound attenuation of outdoors screens).

Technical information about noise reduction in workrooms can be found in ISO 11690-2.



# Acoustics — Measurement of the *in situ* sound attenuation of a removable screen

## 1 Scope

This International Standard specifies methods for evaluating the *in situ* sound attenuation performance of a removable screen, either indoors or outdoors. This engineering grade method is based on an insertion loss measurement that can be carried out either with shielding of the actual sound source(s) or using an artificial sound source.

The sound attenuation performance achieved by such a screen, as evaluated by the present International Standard, depends on:

- diffraction around the edges of the screen;
- transmission through the components of the screen;
- absorption of the panels of the screen, as well as in its surroundings;
- the room in which the screen stands if indoors.

When a specific work station is to be shielded, the *in situ* sound attenuation value describes the effect of the screen. However, when a complete area is to be shielded, the performance of the screen will vary depending on the positions used for measurement. Therefore, it is recommended that the maximum and minimum values of sound attenuation are given. The sound attenuation performance is determined in terms of insertion loss.

When assessing the performance of a screen located indoors, the room geometry and reflections from walls, ceilings and room fittings will influence the performance. As a consequence, the comparison of screen performance can only be made if the test conditions are identical.

This International Standard is applicable to screens with height and length greater than 1,5 m. However, it may also be used for smaller screens provided that the interested parties come to an agreement on this.

As environmental conditions can affect the measurements outdoors, it is recommended that measurements should be restricted to within 25 m of the screen. However, measurements may also cover a greater distance provided that the interested parties come to an agreement on this.

Differences can occur between *in situ* test results. Therefore, comparison of the performance of different screens can be made only on the basis of data based on the same measurement method performed at the same location.

This International Standard applies to a complete screen only and not to individual components from which it is made. Sound insulation and sound absorption for screen components (such as panel elements, doors, windows) should be measured according to other relevant standards.

This International Standard is not applicable to open plan offices screens nor to outdoor barriers dealing with community noise. It is also not intended for qualification purposes.