

#### **DRAFT**

## ÖNORM EN ISO 3382-1

Edition: 2009-03-15

## Acoustics — Measurement of room acoustic parameters

#### Part 1: Performance spaces

(ISO/FDIS 3382-1:2009)

Akustik — Messung von raumakustischen Parametern — Teil 1: Aufführungsräume (ISO/FDIS 3382-1:2009)

Acoustique — Mesurage des paramètres acoustiques des salles — Partie 1: Salles de spectacles (ISO/FDIS 3382-1:2009)

#### Note:

Because of possible comments, the final version of this  $\ddot{\text{O}}\text{NORM}$  can differ from the present Draft.

Please send your comments (in writing) by **2009-04-30** to Austrian Standards Institute.

Publisher and printing
Austrian Standards Institute/

Österreichisches Normungsinstitut (ON)

Heinestraße 38, 1020 Wien

Copyright © Austrian Standards Institute 2009.
All rights reserved! No part of this publication may be reproduced or utilized in any form or by any means

 electronic, mechanical, photocopying or any other data carries without prior permission!

E-Mail: publishing@as-plus.at

Internet: www.as-plus.at/nutzungsrechte

**Sale and distribution** of national and foreign standards and technical regulations via

Austrian Standards plus GmbH Heinestraße 38, 1020 Wien E-Mail: sales@as-plus.at Internet: www.as-plus.at

24-Hours-Webshop: www.as-plus.at/shop

Tel.: +43 1 213 00-444 Fax.: +43 1 213 00-818 ICS 91.120.20

Identical (IDT) withISO/FDIS 3382-1:2009-02Identical (IDT) withprEN ISO 3382-1:2009-02

responsible ON-Committee ON-K 208

Acoustic properties of building products and buildings

Z

#### **Explanations concerning Draft**

The present Draft European Standard **EN ISO 3382-1** has been submitted to CEN members for voting. In case of a positive result of the voting as required by CEN/CENELEC regulations, this Draft will be published as EN.

Like all member organizations of CEN, the Austrian Standards Institute is basically obliged to implement European Standards in Austria and to withdraw conflicting standards.

The Austrian Standards Institute herewith submits this Draft of a European Standard as Draft ÖNORM to public enquiry and information.

Since a German translation is not yet available, the English version of prEN ISO 3382-1 is submitted to public enquiry and information, in order to observe the deadline fixed by CEN.

#### **Comments on this Draft**

Please find below some practical instructions intended to offer you and the competent committee assistance for the processing of comments and proposals for modification:

Form For your comments/proposals for change, please use the relevant form

available from Internet. Download under

http://www.on-norm.at/normungsarbeit/einspruch.htm

**Structure** Please use a new line for each comment. This facilitates the attribution

of the comments received to the different clauses and chapters of the

respective Draft.

Language Please formulate technical comments on European Standards if

possible in English, since English is the common working language of

the most European standardizing bodies.

Editorial and/or linguistic proposals for change/improvement of

German versions of European Standards shall (certainly) be submitted

in German.

Script/Format Please use the script "Arial" with 9 pt font size.

Please do not change the formats.

Dispatch Please send your comments by E-Mail to the competent Committee

Manager (roman.schremser@on-norm.at)

## **EUROPEAN STANDARD** NORME EUROPÉENNE **EUROPÄISCHE NORM**

## FINAL DRAFT **FprEN ISO 3382-1**

February 2009

ICS 91.120.20

Will supersede EN ISO 3382:2000

#### **English Version**

#### Acoustics - Measurement of room acoustic parameters - Part 1: Performance spaces (ISO/FDIS 3382-1:2009)

Acoustique - Mesurage des paramètres acoustiques des salles - Partie 1: Salles de spectacles (ISO/FDIS 3382-1:2009)

Akustik - Messung von raumakustischen Parametern - Teil 1: Aufführungsräume (ISO/FDIS 3382-1:2009)

This draft European Standard is submitted to CEN members for parallel formal vote. It has been drawn up by the Technical Committee CEN/TC 126.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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.

CEN members are the national standards bodies of 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 United Kingdom.

Warning: This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels



$\circ$
0
Õ
Ñ
Ö.
ö
$\sim$
S
0
മ
న
.≌
?
$\overline{a}$
ന്
0,
$\nabla$
Œ
0
=
≒
>
0
$\Box$
Ξ.
Z
$\overline{}$
$\sim$

Contents	Page
Foreword	

#### **Foreword**

This document (FprEN ISO 3382-1:2009) has been prepared by Technical Committee ISO/TC 43 "Acoustics" in collaboration with Technical Committee CEN/TC 126 "Acoustic properties of building elements and of buildings", the secretariat of which is held by AFNOR.

This document is currently submitted to the parallel Formal Vote.

This document will supersede EN ISO 3382:2000.

#### **Endorsement notice**

The text of ISO/FDIS 3382-1:2009 has been approved by CEN as a FprEN ISO 3382-1:2009 without any modification.





ISO/TC 43/SC 2

Secretariat: DIN

Voting begins on: **2009-02-19** 

Voting terminates on:

2009-04-19

# Acoustics — Measurement of room acoustic parameters —

Part 1: Performance spaces

Acoustique — Mesurage des paramètres acoustiques des salles — Partie 1: Salles de spectacles

Please see the administrative notes on page iii

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.



Reference number ISO/FDIS 3382-1:2009(E)

#### PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

#### Copyright notice

This ISO document is a Draft International Standard and is copyright-protected by ISO. Except as permitted under the applicable laws of the user's country, neither this ISO draft nor any extract from it may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, photocopying, recording or otherwise, without prior written permission being secured.

Requests for permission to reproduce should be addressed to either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Reproduction may be subject to royalty payments or a licensing agreement.

Violators may be prosecuted.



### **ISO/CEN PARALLEL PROCESSING**

The CEN Secretary-General has advised the ISO Secretary-General that this final draft International Standard covers a subject of interest to European standardization. Consultation on the ISO/DIS had the same effect for CEN members as a CEN enquiry on a draft European Standard. In accordance with the ISO-lead mode of collaboration as defined in the Vienna Agreement, this final draft, established on the basis of comments received, is hereby submitted to a parallel two-month FDIS vote in ISO and formal vote in CEN.

Positive votes shall not be accompanied by comments.

Negative votes shall be accompanied by the relevant technical reasons.



$\circ$
Ō
$\approx$
0
Ö
٣.
2
0
Ξ.
Φ
O
.=
$\subseteq$
(D)
ñ
0,
$\overline{}$
ă
õ
$\simeq$
⋝
2
$\mathbf{Q}$
$\Box$
- 7
7
$\overline{}$
$\circ$

Con	tents	Page
Forew	vord	<b>v</b>
Introd	luction	vi
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Measurement conditions	3
5	Measurement procedures	6
6	Evaluation of decay curves	8
7	Measurement uncertainty	9
8	Spatial averaging	10
9	Statement of results	10
Annex	x A (informative) Auditorium measures derived from impulse responses	12
Annex	x B (informative) Binaural auditorium measures derived from impulse responses	21
Annex	x C (informative) Stage measures derived from impulse responses	23
Biblio	ography	25