

DIN EN ISO 3745



ICS 17.140.01

Supersedes
DIN EN ISO 3745:2012-07**Acoustics –****Determination of sound power levels and sound energy levels of noise sources using sound pressure –****Precision methods for anechoic rooms and hemi-anechoic rooms (ISO 3745:2012 + Amd 1:2017);****English version EN ISO 3745:2012 + A1:2017,
English translation of DIN EN ISO 3745:2017-10****Akustik –****Bestimmung der Schallleistungs- und Schallenergiepegel von Geräuschquellen aus Schalldruckmessungen –****Verfahren der Genauigkeitsklasse 1 für reflexionsarme Räume und Halbräume (ISO 3745:2012 + Amd 1:2017);****Englische Fassung EN ISO 3745:2012 + A1:2017,
Englische Übersetzung von DIN EN ISO 3745:2017-10****Acoustique –****Détermination des niveaux de puissance acoustique et des niveaux d'énergie acoustique émis par les sources de bruit à partir de la pression acoustique –****Méthodes de laboratoire pour les salles anéchoïques et les salles semi-anéchoïques (ISO 3745:2012 + Amd 1:2017);****Version anglaise EN ISO 3745:2012 + A1:2017,
Traduction anglaise de DIN EN ISO 3745:2017-10**

Document comprises 75 pages

Translation by DIN-Sprachendienst.

In case of doubt, the German-language original shall be considered authoritative.

A comma is used as the decimal marker.

National foreword

This document (DIN EN ISO 3745:2017-10) includes EN ISO 3745:2012 and EN ISO 3745:2012/A1:2017. The International Standard and Amendment on which this European Standard and Amendment are based have been prepared by Working Group 28 “Basic machinery noise emission standards” of Technical Committee ISO/TC 43/SC 1 “Noise” (Secretariat: DIN, Germany), with the active participation of German experts. It has been prepared in collaboration with Technical Committee CEN/TC 211 “Acoustics” (Secretariat: DIN, Germany).

The responsible German body involved in its preparation was *DIN/VDI-Normenausschuss Akustik, Lärminderung und Schwingungstechnik* (DIN/VDI Standards Committee Acoustics, Noise Control and Vibration Engineering), Working Committee NA 001-01-04 AA “Noise emission of machinery and equipment; measurement, reduction, data collection”.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

The most important revision of this document is in Annex A “General procedures for qualification of anechoic and hemi-anechoic rooms”. In this annex, ISO 26101, *Acoustics — Test methods for the qualification of free-field environments* is generally referenced and precise information of the use of ISO 26101 within the frame of DIN EN ISO 3745 has been specified.

The DIN Standards corresponding to the International Standards referred to in this document are as follows:

ISO 140-3	DIN EN ISO 10140 (all parts)
ISO 3740	DIN EN ISO 3740
ISO 3741:2010	DIN EN ISO 3741:2011-01
ISO 3743-1	DIN EN ISO 3743-1
ISO 3743-2	DIN EN ISO 3743-2
ISO 3744	DIN EN ISO 3744
ISO 3746	DIN EN ISO 3746
ISO 3747	DIN EN ISO 3747
ISO 5725 (all parts)	DIN ISO 5725 (all parts)
ISO 4871	DIN EN ISO 4871
ISO 6926	DIN EN ISO 6926
ISO 7574-1	DIN EN 27574-1
ISO 7574-2	DIN EN 27574-2
ISO 7574-3	DIN EN 27574-3
ISO 7574-4	DIN EN 27574-4
ISO 9614-1	DIN EN ISO 9614-1
ISO 9614-2	DIN EN ISO 9614-2
ISO 9614-3	DIN EN ISO 9614-3
ISO 11201	DIN EN ISO 11201
ISO 11690-1	DIN EN ISO 11690-1
ISO 12001:1996	DIN EN ISO 12001:2010-01
ISO 80000-8:2007	DIN EN ISO 80000-8:2008-01
IEC 60942:2003	DIN EN 60942:2004-05
IEC 61183	DIN EN 61183
IEC 61260:1995 + A1:2001	DIN EN 61260:2003-03
IEC 61672-1:2002	DIN EN 61672-1:2003-10
ISO/IEC Guide 98-3	DIN V ENV 13005

Amendments

This standard differs from DIN EN ISO 3745:2012-07 as follows:

- a) normative references have been updated;
- b) Annex A has been revised;
- c) the Bibliography has been updated;
- d) Annex ZA has been revised;
- e) the standard has been harmonized with current rules of presentation.

Previous editions

DIN 45635: 1970-03

DIN 45635-1: 1972-01, 1984-04

DIN EN ISO 3745: 2004-05, 2009-11, 2012-07

DIN EN ISO 3745 Corrigendum 1: 2007-02

National Annex NA (informative)

Bibliography

DIN V ENV 13005, *Guide to the expression of uncertainty in measurement*

DIN EN 27574-1, *Acoustics — Statistical methods for determining and verifying stated noise emission values of machinery and equipment — Part 1: General considerations and definitions*

DIN EN 27574-2, *Acoustics — Statistical methods for determining and verifying stated noise emission values of machinery and equipment — Part 2: Methods for stated values for individual machines*

DIN EN 27574-3, *Acoustics — Statistical methods for determining and verifying stated noise emission values of machinery and equipment — Part 3: Simple (transition) method for stated values for batches of machines*

DIN EN 27574-4, *Acoustics — Statistical methods for determining and verifying stated noise emission values of machinery and equipment — Part 4: Methods for stated values for batches of machines*

DIN EN 60942:2004-05, *Electroacoustics — Sound calibrators (IEC 60942:2003)*

DIN EN 61183, *Electroacoustics — Random-incidence and diffuse-field calibration of sound level meters*

DIN EN 61260:2003-03, *Electroacoustics — Octave-band and fractional-octave-band filters (IEC 61260:1995 + A1:2001)*

DIN EN 61672-1:2003-10, *Electroacoustics — Sound level meters — Part 1: Specifications (IEC 61672-1:2002)*

DIN EN ISO 3740, *Acoustics — Determination of sound power levels of noise sources — Guidelines for the use of basic standards*

DIN EN ISO 3741:2011-01, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Precision methods for reverberation test rooms (ISO 3741:2010)*

DIN EN ISO 3743-1, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering methods for small, movable sources in reverberant fields — Part 1: Comparison method for a hard-walled test room*

DIN EN ISO 3743-2, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Engineering methods for small, movable sources in reverberant fields — Part 2: Methods for special reverberation test rooms*

DIN EN ISO 3744, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering methods for an essentially free field over a reflecting plane*

DIN EN ISO 3746, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Survey method using an enveloping measurement surface over a reflecting plane*

DIN EN ISO 3747, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering/survey methods for use in situ in a reverberant environment*

DIN EN ISO 4871, *Acoustics — Declaration and verification of noise emission values of machinery and equipment*

DIN EN ISO 6926, *Acoustics — Requirements for the performance and calibration of reference sound sources used for the determination of sound power levels*

DIN EN ISO 9614-1, *Acoustics — Determination of sound power levels of noise sources using sound intensity — Part 1: Measurement at discrete points*

DIN EN ISO 9614-2, *Acoustics — Determination of sound power levels of noise sources using sound intensity — Part 2: Measurement by scanning*

DIN EN ISO 9614-3, *Acoustics — Determination of sound power levels of noise sources using sound intensity — Part 3: Precision method for measurement by scanning*

DIN EN ISO 10140 (all parts), *Acoustics — Laboratory measurement of sound insulation of building elements*

DIN EN ISO 11201, *Acoustics — Noise emitted by machinery and equipment— Determination of emission sound pressure levels at a work station and at other specified positions in an essentially free field over a reflecting plane with negligible environmental corrections*

DIN EN ISO 11690-1, *Acoustics — Recommended practice for the design of low-noise workplaces containing machinery — Part 1: General characteristics*

DIN EN ISO 12001:2010-01, *Acoustics — Noise emitted by machinery and equipment — Rules for the drafting and presentation of a noise test code (ISO 12001:1996)*

DIN EN ISO 80000-8:2008-01, *Quantities and units — Part 8: Acoustics (ISO 80000-8:2007, corrected 2007-08-15)*

DIN ISO 5725 (all parts), *Accuracy (trueness and precision) of measurement methods and results*

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English Version

Acoustics —
Determination of sound power levels and sound energy
levels of noise sources using sound pressure —
Precision methods for anechoic rooms and
hemi-anechoic rooms
(ISO 3745:2012 + Amd 1:2017)

Acoustique —

Détermination des niveaux de puissance acoustique et
des niveaux d'énergie acoustique émis par les sources
de bruit à partir de la pression acoustique —
Méthodes de laboratoire pour les salles anéchoïques et
les salles semi-anéchoïques
(ISO 3745:2012 + Amd 1:2017)

Akustik —

Bestimmung der Schallleistungs- und
Schallenergiepegel von Geräuschquellen aus
Schalldruckmessungen —
Verfahren der Genauigkeitsklasse 1 für reflexionsarme
Räume und Halbräume
(ISO 3745:2012 + Amd 1:2017)

This European Standard was approved by CEN on 14 March 2012. Amendment A1 was approved by CEN on 20 March 2017.

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

This amendment 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-CENELEC Management Centre has the same status as the official versions.

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