

DIN EN ISO 11201**DIN**

ICS 17.140.20

Supersedes
DIN EN ISO 11201:2009-11**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 (ISO 11201:2010)****English translation of DIN EN ISO 11201:2010-10****Akustik –****Geräuschabstrahlung von Maschinen und Geräten –****Bestimmung von Emissions-Schalldruckpegeln am Arbeitsplatz und an anderen festgelegten Orten in einem im Wesentlichen freien Schallfeld über einer reflektierenden Ebene mit vernachlässigbaren Umgebungskorrekturen (ISO 11201:2010)**

Englische Übersetzung von DIN EN ISO 11201:2010-10

Acoustique –**Bruit émis par les machines et équipements –****Détermination des niveaux de pression acoustique d'émission au poste de travail et en d'autres positions spécifiées dans des conditions approchant celles du champ libre sur plan réfléchissant avec des corrections d'environnement négligeables (ISO 11201:2010)**

Traduction anglaise de DIN EN ISO 11201:2010-10

Document comprises 44 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 standard has been prepared by Technical Committee ISO/TC 43 "Acoustics", Subcommittee SC 1 "Noise" (Secretariat: DS, Denmark), Working Group WG 28 "Basic machinery noise emission standards" in collaboration with Technical Committee CEN/TC 211 "Acoustics" (Secretariat: DS, Denmark).

The responsible German body involved in its preparation was the *Normenausschuss Akustik, Lärminderung und Schwingungsstechnik im DIN und VDI* (Acoustics, Noise Control and Vibration Engineering Standards Committee in DIN and VDI), Working Committee NA 001-01-04 AA *Geräuschemission von Maschinen und Anlagen; Messung, Minderung, Datensammlung*.

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

ISO 3534-2	DIN ISO 3534-2	ISO 9614-1	DIN EN ISO 9614-1
ISO 3740	DIN EN ISO 3740 ¹⁾	ISO 9614-2	DIN EN ISO 9614-2
ISO 3741	DIN EN ISO 3741 ¹⁾	ISO 9614-3	DIN EN ISO 9614-3
ISO 3743-1	DIN EN ISO 3743-1 ¹⁾	ISO 11200	DIN EN ISO 11200 ¹⁾
ISO 3743-2	DIN EN ISO 3743-2	ISO 11202	DIN EN ISO 11202
ISO 3744	DIN EN ISO 3744 ¹⁾	ISO 11203	DIN EN ISO 11203
ISO 3745	DIN EN ISO 3745 ¹⁾	ISO 11204	DIN EN ISO 11204
ISO 3746	DIN EN ISO 3746 ¹⁾	ISO 11205	DIN EN ISO 11205
ISO 3747	DIN EN ISO 3747 ¹⁾	ISO/TR 11690-3	DIN EN ISO 11690-3
ISO 4871	DIN EN ISO 4871	ISO 12001	DIN EN ISO 12001
ISO 5725 standards series	DIN ISO 5725 standards series	IEC 60942	DIN EN 60942
ISO 6926	DIN EN ISO 6926	IEC 61260	DIN EN 61260
ISO 7574-1	DIN EN 27574-1	ISO/IEC Guide 98-3	DIN V ENV 13005
ISO 9613-2	DIN ISO 9613-2		

Amendments

This standard differs from DIN EN ISO 11201:2009-11 as follows:

- a) the method has been extended to accuracy grade 1 (precision) and accuracy grade 2 (engineering measurements);
- b) criteria for the test environment (1.3) have been specified;
- c) criteria for background noise (5.4) have been supplemented and absolute criteria (B.1) have been added;
- d) for accuracy grade 1, the conversion of the emission sound pressure levels has been based on meteorological reference conditions;

1) Under revision.

- e) Clause 11 "Measurement uncertainty" has been completely revised and a new Annex C "Guidance on the development of information on measurement uncertainty" has been included;
- f) Annex D "Principles of the methodology" has been included;
- g) the former Annex A "Guidelines for the detection of impulsive noise" has been deleted;
- h) the standard has been editorially revised.

Previous editions

DIN 45635: 1970-03

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

DIN EN ISO 11201: 1996-07, 2009-11

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 60942, *Electroacoustics — Sound calibrators (IEC 60942:2003)*

DIN EN 61260, *Electroacoustics — Octave-band and fractional-octave-band filters*

DIN EN 61672-1, *Electroacoustics — Sound level meters — Part 1: Specifications*

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

DIN EN ISO 3741, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Precision methods for reverberation rooms*

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

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 of noise sources using sound pressure — Engineering method in an essential free field over a reflecting plane*

DIN EN ISO 3745, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Precision methods for anechoic and hemi-anechoic rooms*

DIN EN ISO 3746, Acoustics — Determination of sound power 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 of noise sources using sound pressure — Comparison method for use *in situ*

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 11200, Acoustics — Noise emitted by machinery and equipment — Guidelines for the use of basic standards for the determination of emission sound pressure levels at a work station and at other specified positions

DIN EN ISO 11202, Acoustics — Noise emitted by machinery and equipment — Measurement of emission sound pressure levels at a work station and at other specified positions applying approximate environmental corrections

DIN EN ISO 11203, Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels at a work station and at other specified positions from the sound power level

DIN EN ISO 11204, Acoustics — Noise emitted by machinery and equipment — Measurement of emission sound pressure levels at a work station and at other specified positions applying accurate environmental corrections

DIN EN ISO 11205, Acoustics — Noise emitted by machinery and equipment — Engineering method for the determination of emission sound pressure levels *in situ* at the work station and at other specified positions using sound intensity

DIN EN ISO 11690-3, Acoustics — Recommended practice for the design of low-noise workplaces containing machinery — Part 3: Sound propagation and noise prediction in workrooms

DIN EN ISO 12001, Acoustics — Noise emitted by machinery and equipment — Rules for the drafting and presentation of a noise test code

DIN ISO 3534-2, Statistics — Vocabulary and symbols — Part 2: Applied statistics

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

DIN ISO 9613-2, Acoustics — Attenuation of sound during propagation outdoors — Part 2: General method of calculation

May 2010

ICS 17.140.20

Supersedes EN ISO 11201:2009

English Version

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
(ISO 11201:2010)

Acoustique - Bruit émis par les machines et équipements -
Détermination des niveaux de pression acoustique
d'émission au poste de travail et en d'autres positions
spécifiées dans des conditions approchant celles du champ
libre sur plan réfléchissant avec des corrections
d'environnement négligeables (ISO 11201:2010)

Akustik - Geräuschabstrahlung von Maschinen und
Geräten - Bestimmung von Emissions-Schalldruckpegeln
am Arbeitsplatz und an anderen festgelegten Orten in
einem im Wesentlichen freien Schallfeld über einer
reflektierenden Ebene mit vernachlässigbaren
Umgebungskorrekturen (ISO 11201:2010)

This European Standard was approved by CEN on 22 April 2010.

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.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, 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.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

	Page
Foreword.....	3
Introduction	4
1 Scope	5
2 Normative references	6
3 Terms and definitions	6
4 Instrumentation.....	11
5 Test environment.....	11
6 Measured quantities	15
7 Quantities to be determined	15
8 Mounting and operation of source under test.....	16
9 Microphone positions	18
10 Measurements.....	20
11 Measurement uncertainty	21
12 Information to be recorded	24
13 Test report.....	26
Annex A (normative) Allocation of the accuracy grade (1 or 2)	27
Annex B (normative) Criteria for background noise for measurements in frequency bands.....	28
Annex C (informative) Guidance on the development of information on measurement uncertainty.....	30
Annex D (informative) Principles of the methodology	36
Annex E (informative) Example of a test table	37
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC	38
Bibliography	39