

## საქართველოს სტანდარტი

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აკუსტიკა - ხმაური გამოყოფილი მანქანა-დანადგარები და აღჭურვილობა-  
ემისიის განსაზღვრა ხმაურის წნევის დონეების სამუშაო ადგილზე და სხვა  
მითითებულ პოზიციებზე სწორი გარემოს დაცვის შესწორებების გამოყენებით  
(ისო 11204:2010)

საქართველოს სტანდარტებისა და მეტროლოგიის  
ეროვნული სააგენტო  
თბილისი

# სსტ ენ ისო 11204:2010/2019

## საინფორმაციო მონაცემები

1 შემუშავებულია საქართველოს სტანდარტების და მეტროლოგიის ეროვნული სააგენტოს სტანდარტების დეპარტამენტის მიერ

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5 რეგისტრირებულია საქართველოს სტანდარტების და მეტროლოგიის ეროვნული სააგენტოს რეესტრში: 2019 წლის 6 დეკემბერი №268-1.3-016537

დაუშვებელია წინამდებარე სტანდარტის სრული ან ნაწილობრივი კვლავწარმოება, ტირაჟირება და გავრცელება სსიპ საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს ნებართვის გარეშე

English Version

Acoustics - Noise emitted by machinery and equipment -  
Determination of emission sound pressure levels at a work  
station and at other specified positions applying accurate  
environmental corrections (ISO 11204:2010)

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 en appliquant des corrections d'environnement  
exactes (ISO 11204:2010)

Akustik - Geräuschabstrahlung von Maschinen und  
Geräten - Bestimmung von Emissions-Schalldruckpegeln  
am Arbeitsplatz und an anderen festgelegten Orten unter  
Anwendung exakter Umgebungskorrekturen (ISO  
11204:2010)

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

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

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## Foreword

This document (EN ISO 11204:2010) 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of an identical text or by endorsement, at the latest by November 2010, and conflicting national standards shall be withdrawn at the latest by November 2010.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 11204:2009.

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 EU Directive.

For relationship with EU Directive, see informative Annex ZA, which is an integral part 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, 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 the United Kingdom.

### Endorsement notice

The text of ISO 11204:2010 has been approved by CEN as a EN ISO 11204:2010 without any modification.

## Annex ZA (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 Union 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 corresponding 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.

საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.

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**Acoustics — Noise emitted by machinery  
and equipment — Determination of  
emission sound pressure levels at a work  
station and at other specified positions  
applying accurate environmental  
corrections**

*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 en appliquant des  
corrections d'environnement exactes*



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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

ISO 11204 was prepared by Technical Committee ISO/TC 43, *Acoustics*, Subcommittee SC 1, *Noise*.

This second edition cancels and replaces the first edition (ISO 11204:1995), which has been technically revised. It also incorporates the Technical Corrigendum ISO 11204:1995/Cor.1:1997.

საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.

## Introduction

This International Standard specifies a method for determining the emission sound pressure levels at a work station and at other well defined positions, in the vicinity of a machine or piece of equipment, *in situ*. It is one of a series (ISO 11200<sup>[15]</sup> to ISO 11205<sup>[19]</sup>) which specifies various methods for determining the emission sound pressure level at a work station and at other specified positions of a machine or equipment. ISO 11200<sup>[15]</sup> gives guidance on the choice of the method to be used to determine the emission sound pressure levels of machinery and equipment.

The method specified in this International Standard differs from those of ISO 11201<sup>[16]</sup> in determining and applying a local environmental correction. It differs from ISO 11202<sup>[17]</sup> by using an exact measurement of sound pressure levels on a reference measurement surface to determine the directivity of the sound radiation of the machine under test. The acoustical properties of the room have to be determined to qualify the test environment and to determine a correction for local environmental influences applied to the measured sound pressure levels. With the method specified in this International Standard, results of accuracy grade 2 (engineering grade) or accuracy grade 3 (survey grade) are obtained.

The method specified in this International Standard is generally applicable *in situ*. No assumptions about the directivity of the radiation or the source location are necessary, because this directivity is determined measuring the sound pressure levels on an enveloping surface. The grade of accuracy of the procedure with existing conditions can be qualified as engineering or survey.

In general, the emission sound pressure levels are less than or equal to those that occur when the machine is operating in its normal surroundings. This is because the sound pressure levels are determined by excluding the effects of background noise, as well as the effects of reflections other than those from the reflecting plane on which the machine under test is placed. For determination or calculation of the sound pressure level at the operator's position with the machine operating in a room, both sound power level and sound pressure level are required (as well as information on the room properties or reflections and noise from other sound sources or machines). A method of calculating the sound pressure levels in the vicinity of a machine operating alone in a workroom is given in ISO/TR 11690-3<sup>[20]</sup>. Commonly observed differences are 1 dB to 5 dB, but in extreme cases the difference may be even greater.