

საქართველოს სტანდარტი

აკუსტიკა - ხმის ენერჯის დონის განსაზღვრა ხმაურის წყაროების
გამოყენებით - კვლევის მეთოდი შემოკვრის გაზომვით ამრეკლ ბრტყელ
ზედაპირის გამოყენებით (ისო 3746:2010)

საქართველოს სტანდარტებისა და მეტროლოგიის
ეროვნული სააგენტო
თბილისი

სსტ ენ ისო 3746:2010/2019

საინფორმაციო მონაცემები

1 შემუშავებულია საქართველოს სტანდარტების და მეტროლოგიის ეროვნული სააგენტოს სტანდარტების დეპარტამენტის მიერ

2 დამტკიცებულია და შემოღებულია სამოქმედოდ საქართველოს სტანდარტების და მეტროლოგიის ეროვნული სააგენტოს 2019 წლის 6 დეკემბრის № 98 განკარგულებით

3 მიღებულია გარეკანის თარგმნის მეთოდით სტანდარტიზაციის ევროპული კომიტეტის სტანდარტი ენ ისო 3746:2010 „აკუსტიკა - ხმის ენერჯის დონის განსაზღვრა ხმაურის წყაროების გამოყენებით - კვლევის მეთოდი შემოკვრის გაზომვით ამრეკლ ბრტყელ ზედაპირის გამოყენებით (ისო 3746:2010) ”

4 პირველად

5 რეგისტრირებულია საქართველოს სტანდარტების და მეტროლოგიის ეროვნული სააგენტოს რეესტრში: 2019 წლის 6 დეკემბერი №268-1.3-016199

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

English Version

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 (ISO 3746:2010)

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 - Méthode de contrôle employant une surface de mesure enveloppante au-dessus d'un plan réfléchissant (ISO 3746:2010)

Akustik - Ermittlung der Schalleistungs- und Schallenergiepegel von Geräuschquellen aus Schalldruckmessungen - Hüllflächenverfahren der Genauigkeitsklasse 3 über einer reflektierenden Ebene (ISO 3746:2010)

This European Standard was approved by CEN on 13 November 2010.

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

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საინფორმაციო ნაწილი. სრული ტექსტის სახანაგავად შეიძინეთ სტანდარტი.

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Foreword

This document (EN ISO 3746:2010) 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 June 2011, and conflicting national standards shall be withdrawn at the latest by June 2011.

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 3746:2009.

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(s).

For relationship with EU Directive(s), 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 3746:2010 has been approved by CEN as a EN ISO 3746:2010 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 სახსრად შეიძენი სტანდარტი.

**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**

*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 — Méthode de contrôle employant une
surface de mesure enveloppante au-dessus d'un plan réfléchissant*



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Published in Switzerland

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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.

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ISO 3746 was prepared by Technical Committee ISO/TC 43, *Acoustics*, Subcommittee SC 1, *Noise*.

This third edition cancels and replaces the second edition (ISO 3746:1995), which has been technically revised. It also incorporates the Technical Corrigendum ISO 3746:1995/Cor.1:1995.

საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.

Introduction

This International Standard is one of the series ISO 3741^[2] to ISO 3747^[6], which specify methods for determining the sound power levels and sound energy levels of noise sources including machinery, equipment and their sub-assemblies. Guidelines to select one of those methods are provided in ISO 3740^[1]. The selection depends on the environment of the available test facility and on the precision of the sound power level or sound energy level values required. It may be necessary to establish a test code for the individual noise source in order to select the appropriate sound measurement surface and microphone array from among those allowed in each of the ISO 3740^[1] to ISO 3747^[6] series, and to give requirements for test unit mounting, loading, and operating conditions under which the sound power levels or sound energy levels are to be obtained. The sound power emitted by a given source into the test environment is calculated from the mean square sound pressure that is measured over a hypothetical measurement surface enclosing the source, and the area of that surface. The sound energy for a single machine event is calculated from this sound power and the time over which it existed.

This International Standard specifies methods giving results of ISO 12001:1996, accuracy grade 3 (survey grade) when measurements are performed within industrial buildings or outdoors. Ideally, the test source should be mounted on a sound-reflecting plane located in a large open space. For sources normally installed on the floor of machine rooms, corrections are defined to account for undesired reflections from nearby objects, walls, and the ceiling, and for the residual background noises that occur there.

The methods specified in this International Standard permit the determination of the sound power level and the sound energy level with frequency A-weighting applied.

For applications where greater accuracy is required, reference can be made to ISO 3744, ISO 3745^[5] or an appropriate part of ISO 9614^{[14]-[16]}. If the relevant criteria for the measurement environment specified in this International Standard are not met, it might be possible to refer to another of the ISO 3741^[2] to ISO 3747^[6] series, or to an appropriate part of ISO 9614^{[14]-[16]}.