

Akustika. Mehhanismide ja seadmete tekitatud müra andmete võrdlemine

Acoustics - Procedure for the comparison of noise-emission data for machinery and equipment

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 11689:1999 sisaldab Euroopa standardi EN ISO 11689:1996 ingliskeelset teksti.

Käesolev dokument on jõustatud 12.12.1999 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 11689:1999 consists of the English text of the European standard EN ISO 11689:1996.

This document is endorsed on 12.12.1999 with the notification being published in the official publication of the Estonian national standardisation organisation.

The standard is available from Estonian standardisation organisation.

Käsitlusala:

Standard kirjeldab meetodit mehhanismide või seadmete pere, tüübi, rühma või alarühma korral konstruktsiooni akustilise taseme kindlakstegemiseks müraemissiooni taseme alusel. Meetodit saab kasutada mis tahes liiki mehhanismide või seadmete korral.

Scope:

ICS 17.140.20

Võtmesõnad: akustika, andmed, kogumine, mehhanismid, mootorimüra, müra (heli), seadmed, võrdlus

ICS 17.140.20

Descriptors: Noise measurement, noise emission values, machinery.

English version

Acoustics

**Procedure for the comparison of noise-emission data
for machinery and equipment**

(ISO 11689:1996)

Acoustique – Procédure de comparaison
des données d'émission sonore des
machines et équipements
(ISO 11689:1996)

Akustik – Vorgehensweise für den
Vergleich von Geräuschemissionswerten
für Maschinen und Geräte
(ISO 11689:1996)

This European Standard was approved by CEN on 1996-10-10 and is identical to the ISO Standard as referred to.

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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

International Standard

ISO 11689:1996 Acoustics – Procedure for the comparison of noise-emission data for machinery and equipment, which was prepared by ISO/TC 43 'Acoustics' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 211 'Acoustics', the Secretariat of which is held by DS, as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by June 1997 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 11689:1996 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to international publications are listed in Annex ZA (normative).

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Introduction

National and international regulations increasingly require the production and use of low-noise machinery and equipment. This implies that manufacturers, users of machinery and equipment and authorities are aware of the noise emission of a particular product in relation to the noise emission of the relevant machine family. This will only be possible if reliable information on the actual noise emission is available or can be determined.

Based on this information, any index of noise-control performance can be determined for a well-defined family, type or group of machinery or equipment available on the market at a stated time.

The comparison and evaluation of noise-emission data are of use to

- a) a designer requiring information about noise levels for a particular family, for example when specifying the desired properties of a new concept;
- b) a user and/or buyer of machinery or equipment belonging to a specific family, who wishes to compare similar machinery or equipment available on the market with regard to noise emission;
- c) working groups preparing machinery safety standards, noise test codes and/or noise guidelines relating to a particular family;
- d) authorities in charge of legislation, labour supervision and inspection, health and safety at work;
- e) manufacturers and potential users of noise-emission data bases;
- f) consultants in acoustics using appropriate techniques for performing a first evaluation of the noise level on a site.

In addition to knowledge about noise control at source by design, the evaluation procedure requires particular knowledge of the machine group in question.

Collecting noise-emission data and editing clusters of noise-emission data are the responsibility of a committee of the parties involved (e.g. manufacturers, authorities or consumer organisations).

1 Scope

This International Standard specifies a method for establishing the noise-control performance for a family, type, group or sub-group of machinery or equipment on the basis of noise-emission data. It is, in principle, applicable to any kind of machinery or equipment for which a noise test code exists or comparable noise-emission data are available.

NOTE 1 The general procedure described in this International Standard is, in principle, applicable to other physical agents (e.g. vibration).

This International Standard specifies methods and requirements for comparison of noise-emission data so that they can be used for the determination of noise-control performance.

The methods presented allow evaluation of the noise emission of individual machines or of a single type of machine within a machine group, i.e. allow a comparison of the acoustical aspects of machines with comparable non-acoustical data and fields of application.

Annex B gives examples of how the evaluation of collected noise-emission data for a machine group can be carried out.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based

on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 12001:1996, *Acoustics — Noise emitted by machinery and equipment — Rules for the drafting and presentation of a noise test code*.

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 12001 and the following definitions apply.

3.1 family of machinery or equipment: Machinery or equipment of similar design or type, intended to perform the same functions.

3.2 measured noise-emission value: Value of the time-averaged A-weighted sound power level L_{WA} , or the A-weighted emission sound pressure level L_{pA} , or the C-weighted peak emission sound pressure level $L_{pC,peak}$ determined from measurements.

3.3 declared noise-emission value: Value of the declared A-weighted sound power level $L_{WA,d}$, the declared A-weighted emission sound pressure level $L_{pA,d}$, or the declared C-weighted peak emission sound pressure level, $L_{pC,peak,d}$.

3.4 characteristic machine parameter: Non-acoustic quantity which characterizes a particular group of machines.