

**Electroacoustics - Simulators of human head and ear -- Part 6: Mechanical coupler for the measurements on bone vibrators**

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Part 6: Mechanical coupler for the measurements on  
bone vibrators

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 60318-6:2008 sisaldab Euroopa standardi EN 60318-6:2008 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 19.08.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 23.07.2008.

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This Estonian standard EVS-EN 60318-6:2008 consists of the English text of the European standard EN 60318-6:2008.

This standard is ratified with the order of Estonian Centre for Standardisation dated 19.08.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 23.07.2008.

The standard is available from Estonian standardisation organisation.

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English version

**Electroacoustics -  
Simulators of human head and ear -  
Part 6: Mechanical coupler for the measurement of bone vibrators  
(IEC 60318-6:2007)**

Electroacoustique -  
Simulateurs de tête et d'oreille humaines -  
Partie 6: Coupleur mécanique  
destiné à la mesure des ossivibrateurs  
(CEI 60318-6:2007)

Akustik -  
Simulatoren des menschlichen  
Kopfes und Ohres -  
Teil 6: Mechanischer Kuppler  
für Messungen an Knochenleitungshörern  
(IEC 60318-6:2007)

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**CENELEC**

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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

The text of document 29/615/CDV, future edition 1 of IEC 60318-6, prepared by IEC TC 29, Electroacoustics, was submitted to the IEC-CENELEC parallel Unique Acceptance Procedure and was approved by CENELEC as EN 60318-6 on 2008-06-01.

This European Standard supersedes HD 590 S1:1991.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2009-03-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2011-06-01

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 60318-6:2007 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60118-9	NOTE	Harmonized as HD 450.9 S1:1987 (not modified).
IEC 60645-1	NOTE	Harmonized as EN 60645-1:2001 (not modified).
ISO 389-3	NOTE	Harmonized as EN ISO 389-3:1998 (not modified).
ISO 266	NOTE	Harmonized as EN ISO 266:1997 (not modified).

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**Annex ZA**  
(normative)

**Normative references to international publications  
with their corresponding European publications**

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
BIPM/IEC/ISO/ IFCC/IUPAC/ IUPAP/OIML	1995	Guide to the expression of uncertainty in measurement (GUM)	-	-

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## ELECTROACOUSTICS – SIMULATORS OF HUMAN HEAD AND EAR –

### Part 6: Mechanical coupler for the measurement of bone vibrators

#### 1 Scope

This part of IEC 60318 describes a mechanical coupler for the measurement of the output force of bone vibrators. The mechanical impedance of the coupler is specified in the frequency range 125 Hz to 8 000 Hz. The coupler is intended for calibration of audiometers using bone vibrators having a plane circular tip area of  $175 \text{ mm}^2 \pm 25 \text{ mm}^2$  and for determining the performance of bone conduction hearing aids.

The vibratory force developed by a bone vibrator is not, in general, the same on the coupler as on a person's mastoid. However, the IEC recommends its use as a means for the calibration of specified vibrators used in audiometry and for the exchange of specifications and of data on bone conduction hearing aids.

NOTE Some bone vibrators of hearing aids and some non-standardised bone vibrators still used in audiometry have a curved surface. Users should be aware that those vibrators in general will not be loaded on the mechanical coupler with the same mechanical impedance as the one specified in Table 1 of this standard.

#### 2 Normative reference

The following referenced document is indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BIPM, IEC, ISO, IFCC, IUPAC, IUPAP and OIML:1995, *Guide to the expression of uncertainty in measurement (GUM)*

#### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

##### 3.1

##### **bone-conduction vibrator**

bone vibrator

electro-mechanical transducer that transforms electric oscillations into mechanical vibrations and is intended to be coupled to the bony structure of the head, most commonly the mastoid apophysis

##### 3.2

##### **mechanical coupler**

device for calibrating bone-conduction vibrators designed to present a specified mechanical impedance to a vibrator applied with a specified static force, and equipped with an electromechanical transducer to enable the vibratory force level at the surface of contact between vibrator and mechanical coupler to be determined

##### 3.3

##### **alternating force level**

ten times the logarithm to the base 10 of the ratio of the squared r.m.s. value of the alternating force transmitting the vibration to the square of the reference value of one micronewton