

**Household and similar appliances - Test code for the
determination of airborne acoustical noise - Part 2-2:
Particular requirements for fan heaters**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 60704-2-2:2010 sisaldab Euroopa standardi EN 60704-2-2:2010 ingliskeelset teksti.

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Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 20.03.2009.

Standard on kättesaadav Eesti standardiorganisatsioonist.

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English version

**Household and similar appliances -
Test code for the determination of airborne acoustical noise -
Part 2-2: Particular requirements for fan heaters
(IEC 60704-2-2:2009)**

Appareils électrodomestiques
et analogues -
Code d'essai pour la détermination
du bruit aérien -
Partie 2-2: Règles particulières pour
les ventilo-convecteurs
(CEI 60704-2-2:2009)

Elektrische Geräte für den Hausgebrauch
und ähnliche Zwecke -
Prüfvorschrift für die Bestimmung
der Luftschallemission -
Teil 2-2: Besondere Anforderungen
an Konvektionsheizgeräte
mit erzwungener Konvektion
(IEC 60704-2-2:2009)

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CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 59C/134/CDV, future edition 2 of IEC 60704-2-2, prepared by SC 59C, Heating appliances, of IEC TC 59, Performance of household electrical appliances, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60704-2-2 on 2010-04-01.

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

This European Standard supersedes EN 60704-2-2:1994.

The main changes from the previous edition are as follows: provisions with regard to measurement uncertainty and standard deviation for declaration and verification have been included in the scope.

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

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) 2011-01-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2013-04-01

This Part 2-2 is intended to be used in conjunction with EN 60704-1:1997, *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – Part 1: General requirements*.

The relevant text of Part 1 as amended by this document establishes the test code for electric thermal storage room heaters.

This Part 2-2 supplements or modifies the corresponding clauses of EN 60704-1. When a particular subclause of Part 1 is not mentioned in this Part 2-2, that subclause applies as far as is reasonable. Where this Part 2-2 states "addition", "modification" or "replacement", the relevant text of Part 1 is to be adapted accordingly.

Subclauses or figures which are additional to those in Part 1 are numbered starting from 101.

Unless notes are in a new subclause or involve notes in Part 1, they are numbered starting from 101, including those in a replaced clause or subclause.

Endorsement notice

The text of the International Standard IEC 60704-2-2:2009 was approved by CENELEC as a European Standard without any modification.

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INTRODUCTION

The measuring conditions specified in this part 2-2 provide for sufficient accuracy in determining the noise emitted and comparing the results of measurements taken by different laboratories, whilst simulating as far as possible the practical use of fan heaters.

It is recommended to consider the determination of noise levels as part of a comprehensive testing procedure covering many aspects of the properties and performance of fan heaters.

NOTE As stated in the introduction to IEC 60704-1, this test code is concerned with airborne noise only.

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – TEST CODE FOR THE DETERMINATION OF AIRBORNE ACOUSTICAL NOISE –

Part 2-2: Particular requirements for fan heaters

1 Scope and object

This clause of part 1 is applicable except as follows:

1.1 Scope

1.1.1 General

Replacement:

This standard applies to electric fan heaters, designed for placing on the floor, table or counter, etc., or for wall-mounting.

This standard does not apply to

- electric storage room heaters;
- room humidifiers;
- room dehumidifiers;
- air cleaners;
- heaters designed exclusively for industrial purposes.

1.1.2 Types of noise

Replacement:

ISO 3743-1, ISO 3743-2 and ISO 3744 can be used for measuring noise emitted by fan heaters.

1.1.3 Size of the source

Replacement:

The method specified in ISO 3744 is applicable to noise sources of any size. When applying ISO 3743-1 and ISO 3743-2, care should be taken that the maximum size of the appliance under test fulfils the requirements specified in Subclause 1.3 of ISO 3743-1 and ISO 3743-2.

1.2 Object

Addition:

The frequency range of interest for sound power determination on fan heaters includes at least the octave bands with centre frequencies from 63 Hz to 8000 Hz.

NOTE 1 In many cases, the 63 Hz octave band level does not participate significantly to the A-weighted level.

NOTE 2 When measuring this 63 Hz octave band, a special attention should be paid to the room effect.

Requirements for the declaration of noise emission values are not within the scope of this standard.

NOTE 3 For determining and verifying noise emission values, declared in product specifications, see IEC 60704-3.

1.3 Measurement uncertainty

Replacement:

The estimated values of standard deviations of sound power levels, determined according to this standard, are as follows:

Standard deviation, dB	
σ_r (repeatability)	σ_R (reproducibility)
0,4	1,0

1.101 Standard deviation for declaration and verification

For the purpose of determining and verifying declared noise emission values according to IEC 60704-3, the following values apply:

Standard deviation, dB		
σ_P (production)	σ_t (total)	σ_M (reference)
0,3 – 1,1	1,0 – 1,6	1,5

2 Normative references

This clause of part 1 is applicable.

3 Terms and definitions

This clause of part 1 is applicable.

4 Measurement methods and acoustical environments

This clause of part 1 is applicable except as follows:

4.2 Direct method

Addition:

NOTE If pure tone components are present in the noise emitted, proper precautions should be taken as specified in ISO 3743-2.

4.3 Comparison method

Addition:

NOTE If pure tone components are present in the noise emitted, proper precautions should be taken as specified in ISO 3743-1 and 3743-2.

5 Instrumentation

This clause of part 1 is applicable except as follows: