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EXTENDED VERSION

INTERNATIONAL STANDARD



This extended version of IEC 60704-2-2:2023 includes the content of the references made to IEC 60704-1:2021

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

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 2-2: Particular requirements for fan heaters

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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This extended version (EXV) of the official IEC Standard provides the user with the comprehensive content of the Standard.

IEC 60704-2-2:2023 EXV includes the content of IEC 60704-2-2:2023, and the references made to IEC 60704-1:2021.

The specific content of IEC 60704-2-2:2023 is displayed on a **blue background.**

IEC 60704-2-2 has been prepared by subcommittee 59C: Electrical heating appliances for household and similar purposes, of IEC technical committee 59: Performance of household and similar electrical appliances. It is an International Standard.

This third edition cancels and replaces the second edition published in 2009. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- alignment with the latest edition of IEC 60704-1:2021,
- addition of several ISO standards,
- revision of built-in-conditions,
- addition of requirements on climatic conditions and on background noise.

The text of this International Standard is based on the following documents:

| Draft | Report on voting |
|-------------|------------------|
| 59C/284/CDV | 59C/286/RVC |

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This part 2-2 is intended to be used in conjunction with the fourth edition of IEC 60704-1:2021, *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – Part 1: General requirements*.

The relevant text of IEC 60704-1:2021 as amended by this publication establishes the test code for fan heaters.

This part 2-2 supplements or modifies the corresponding clauses in IEC 60704-1:2021.

When a particular subclause of IEC 60704-1:2021 is not mentioned in this part 2-2, that subclause applies as far as reasonable. Where this standard states "addition", "modification" or "replacement", the relevant requirement, test specifications or explanatory matter in IEC 60704-1:2021 shall be adapted accordingly.

Subclauses or figures which are additional to those in IEC 60704-1:2021 are numbered starting from 101.

Additional annexes are lettered AA, BB, etc.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all the parts in the IEC 60704 series, under the general title *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise*, can be found on the IEC website.

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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

This part of IEC 60704 applies to electric fan heaters, designed for placing on the floor, table or counter, etc., or for mounting.

This document does not apply to

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

For determining and verifying noise emission values declared in product specifications, refer to IEC 60704-3:2019.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

IEC 60704-2 (all parts), *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise*

IEC 60704-3:2019, *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – Part 3: Procedure for determining and verifying declared noise emission values*

IEC 61260-1:2014, *Electroacoustics – Octave-band and fractional-octave-band filters – Part 1: Specifications*

IEC 61672-1:2013, *Electroacoustics – Sound level meters – Part 1: Specifications*

ISO 3743-1:2010, *Acoustics – Determination of sound power levels of noise sources – Engineering methods for small, movable sources in reverberant fields – Part 1: Comparison method for hard-walled test rooms*

ISO 3743-2:2018, *Acoustics – Determination of sound power levels of noise sources using sound pressure – Engineering methods for small, movable sources in reverberant fields – Part 2: Methods for special reverberation test rooms*

ISO 3744:2010, *Acoustics – Determination of sound power levels of noise sources using sound pressure – Engineering method in an essentially free field over a reflecting plane*

ISO 9614-1:1993, *Acoustics – Determination of sound power levels of noise sources using sound intensity – Part 1: Measurement at discrete points*

ISO 9614-2:1996, *Acoustics – Determination of sound power levels of noise sources using sound intensity – Part 2: Measurement by scanning*

ISO 9614-3:2002, *Acoustics – Determination of sound power levels of noise sources using sound intensity – Part 3: Precision method for measurement by scanning*

ISO 6926:2016, *Acoustics – Requirements for the performance and calibration of reference sound sources used for the determination of sound power levels*

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

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

**Appareils électrodomestiques et analogues – Code d'essai pour la détermination
du bruit aérien –
Partie 2-2: Exigences particulières pour les appareils de chauffage soufflants**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 2-2: Particular requirements for fan heaters

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- heaters designed exclusively for industrial purposes.

For determining and verifying noise emission values declared in product specifications, refer to IEC 60704-3:2019.

2 Normative references

This clause of IEC 60704-1:2021 is applicable.

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

**APPAREILS ÉLECTRODOMESTIQUES ET ANALOGUES –
CODE D'ESSAI POUR LA DÉTERMINATION DU BRUIT AÉRIEN –****Partie 2-2: Exigences particulières pour
les appareils de chauffage soufflants**

AVANT-PROPOS

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L'IEC 60704-2-2 a été établie par le sous-comité 59C: Appareils de chauffage électrique à usage domestique et similaire, du comité d'études 59 de l'IEC: Aptitude à la fonction des appareils électrodomestiques et analogues. Il s'agit d'une Norme internationale.

Cette troisième édition annule et remplace la deuxième édition parue en 2009. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

- alignement sur la dernière édition de l'IEC 60704-1:2021,
- ajout de plusieurs normes ISO,
- révision des conditions d'encastrement,
- ajout des exigences relatives aux conditions climatiques et au bruit de fond.

Le texte de cette Norme internationale est issu des documents suivants:

| Projet | Rapport de vote |
|-------------|-----------------|
| 59C/284/CDV | 59C/286/RVC |

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

La présente partie 2-2 est destinée à être utilisée conjointement avec la quatrième édition de l'IEC 60704-1:2021, *Appareils électrodomestiques et analogues – Code d'essai pour la détermination du bruit aérien – Partie 1: Exigences générales*.

Le texte correspondant de l'IEC 60704-1:2021 modifié par la présente publication établit le code d'essai pour les appareils de chauffage soufflants.

La présente partie 2-2 complète ou modifie les articles correspondants de l'IEC 60704-1:2021.

Lorsqu'un paragraphe particulier de l'IEC 60704-1:2021 n'est pas mentionné dans la présente partie 2-2, ce paragraphe s'applique pour autant qu'il soit raisonnable. Lorsque la présente norme spécifie "addition", "modification" ou "remplacement", les exigences, modalités d'essai ou commentaires correspondants de l'IEC 60704-1:2021 doivent être adaptés en conséquence.

Les paragraphes ou les figures qui s'ajoutent à ceux de l'IEC 60704-1:2021 sont numérotés à partir de 101.

Les annexes qui sont ajoutées sont désignées AA, BB, etc.

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Une liste de toutes les parties de la série IEC 60704, publiées sous le titre général *Appareils électrodomestiques et analogues – Code d'essai pour la détermination du bruit aérien*, peut être consultée sur le site web de l'IEC.

Le comité a décidé que le contenu de ce document ne sera pas modifié avant la date de stabilité indiquée sur le site web de l'IEC sous webstore.iec.ch dans les données relatives au document recherché. À cette date, le document sera

- reconduit,
- supprimé, ou
- révisé.

INTRODUCTION

Les conditions de mesure spécifiées dans la présente partie 2-2 assurent une exactitude suffisante pour la mesure du bruit émis et la comparaison des résultats des mesures réalisées par différents laboratoires tout en reproduisant, dans la mesure du possible, l'utilisation pratique des appareils de chauffage soufflants.

Il est recommandé d'envisager la détermination des niveaux de bruit dans le cadre d'une procédure d'essai complète qui couvre de nombreux aspects des propriétés et caractéristiques d'aptitude à la fonction des appareils de chauffage soufflants.

NOTE Comme indiqué dans l'introduction de l'IEC 60704-1, le présent code d'essai concerne uniquement le bruit aérien.

APPAREILS ÉLECTRODOMESTIQUES ET ANALOGUES – CODE D'ESSAI POUR LA DÉTERMINATION DU BRUIT AÉRIEN –

Partie 2-2: Exigences particulières pour les appareils de chauffage soufflants

1 Domaine d'application

Remplacement:

La présente partie de l'IEC 60704 s'applique aux appareils de chauffage soufflants électriques, conçus pour être placés sur le sol, sur une table ou sur un plan de travail, etc., ou pour être fixés.

Le présent document ne s'applique pas:

- aux appareils de chauffage électriques à accumulation;
- aux humidificateurs;
- aux déshumidificateurs;
- aux purificateurs d'air;
- aux appareils de chauffage prévus exclusivement pour des usages industriels.

Pour la détermination et la vérification des valeurs déclarées d'émission sonore dans les spécifications du produit, se référer à l'IEC 60704-3:2019.

2 Références normatives

L'article de l'IEC 60704-1:2021 s'applique.