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Elektriska hushållsapparater och liknande bruksföremål – Provningsmetod för bestämning av luftburet buller – Del 2-17: Särskilda fordringar på robotdammsugare

*Household and similar electrical appliances –
Test code for the determination of airborne acoustical noise –
Part 2-17: Particular requirements for dry-cleaning robots*

Som svensk standard gäller europastandarden EN IEC 60704-2-17:2020. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 60704-2-17:2020.

Nationellt förord

Europastandarden EN IEC 60704-2-17:2020

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 60704-2-17, First edition, 2020 - Household and similar electrical appliances - Test code for the determination of airborne acoustical noise - Part 2-17: Particular requirements for dry-cleaning robots**

utarbetad inom International Electrotechnical Commission, IEC.

Standarden ska användas tillsammans med SS-EN 60704-1, utgåva 3, 2010.

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SEK Svensk Elstandard

Box 1284
164 29 Kista
Tel 08-444 14 00
www.elstandard.se

English Version

**Household and similar electrical appliances - Test code for the
determination of airborne acoustical noise - Part 2-17: Particular
requirements for dry-cleaning robots
(IEC 60704-2-17:2020)**

Appareils électrodomestiques et analogues - Code d'essai
pour la détermination du bruit aérien - Partie 2-17:
Exigences particulières pour les robots de nettoyage à sec
(IEC 60704-2-17:2020)

Elektrische Geräte für den Hausgebrauch und ähnliche
Zwecke - Prüfvorschrift für die Bestimmung der
Luftschallemission - Teil 2-17: Besondere Anforderungen
an Trocken-Reinigungsroboter
(IEC 60704-2-17:2020)

This European Standard was approved by CENELEC on 2020-12-02. CENELEC 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 CEN-CENELEC Management Centre or to any CENELEC member.

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 CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 59F/395/FDIS, future edition 1 of IEC 60704-2-17, prepared by SC 59F "Surface cleaning appliances" of IEC/TC 59 "Performance of household and similar electrical appliances" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60704-2-17:2020.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2021-09-02
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-12-02

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

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association.

Endorsement notice

The text of the International Standard IEC 60704-2-17:2020 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 60704-2-1 NOTE Harmonized as EN 60704-2-1

IEC/ASTM 62885-7 NOTE Harmonized as EN IEC/ASTM 62885-7¹

¹ To be published.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Annex ZA of EN IEC 60704-1:2010 is applicable except as follows:

Add the following references:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60704-1	2010	Household and similar electrical appliances - Test code for the determination of airborne acoustical noise - Part 1: General requirements	EN 60704-1	2010
-	-		+ A11	2012
IEC/TS 62885-1	-	Surface cleaning appliances - Part 1: General requirements on test material and test equipment	-	-

Replace with the following references:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
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	EN ISO 3743-2	2019
ISO 3744	2010	Acoustics - Determination of sound power levels and sound energy levels of noise sources using sound pressure - Engineering methods for an essentially free field over a reflecting plane	EN ISO 3744	2010

CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
1 Scope and object.....	6
2 Normative references	7
3 Terms and definitions	8
4 Measurement methods and acoustical environments	8
5 Instrumentation.....	9
6 Operation and location of appliances under test	9
7 Measurement of sound pressure levels.....	12
8 Calculation of sound pressure and sound power levels.....	13
9 Information to be recorded.....	14
10 Information to be reported	14
Annex A (normative) Standard test table.....	15
Annex B (normative) Test enclosure	15
Annex AA (normative) Fenced area	16
Bibliography.....	17
Figure AA.1 – Example of fence.....	16
Table 101 – Standard deviations of sound power levels	7
Table 102 – Standard deviations for declaration and verification	7

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –
TEST CODE FOR THE DETERMINATION
OF AIRBORNE ACOUSTICAL NOISE –****Part 2-17: Particular requirements for dry-cleaning robots**

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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International Standard IEC 60704-2-17 has been prepared by subcommittee 59F: Surface cleaning appliances of IEC technical committee 59: Performance of household and similar electrical appliances.

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

FDIS	Report on voting
59F/395/FDIS	59F/400/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

This Part 2-17 is intended to be used in conjunction with the third edition (2010) of IEC 60704-1, *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – Part 1: General requirements*.

The relevant text of IEC 60704-1:2010 as amended by this publication establishes the test code for dry-cleaning robots.

This Part 2-17 supplements or modifies the corresponding clauses in IEC 60704-1:2010. When a particular subclause of IEC 60704-1:2010 is not mentioned in this Part 2-17, that subclause is applicable as far as reasonable. Where this standard states "addition", "modification" or "replacement", the relevant requirements, test specifications or explanatory matter in IEC 60704-1:2010 should be adapted accordingly.

Subclauses and tables that are additional to those in IEC 60704-1:2010 are numbered starting from 101.

Unless notes are in a new subclause or involve notes in IEC 60704-1:2010, they are numbered starting from 101, including those in a replaced clause or subclause.

In this document, the following print types are used:

- **terms defined in Clause 3: Arial bold.**

A list of all the parts in the IEC 60704 series, published 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.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

The measuring conditions specified in this Part 2-17 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 dry-cleaning robots.

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 dry-cleaning robots.

NOTE As stated in the introduction to IEC 60704-1:2010, this test code is concerned with airborne noise only.

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

Part 2-17: Particular requirements for dry-cleaning robots

1 Scope and object

This clause of IEC 60704-1:2010 is applicable except as follows:

1.1 Scope

1.1.1 General

Replacement:

These particular requirements apply to electrical dry-cleaning robots (including their accessories and their component parts) for household use or under conditions similar to those in households. This part of IEC 60704-2 applies to electrical dry-cleaning robots operating in dry conditions only.

NOTE Some additions and modifications for dry-cleaning robots operating in wet conditions are under consideration.

This part of IEC 60704-2 does not apply to dry-cleaning robots for industrial or professional purposes.

This document does not apply to

- manually operated vacuum cleaners, and
- dry-cleaning robots for outdoor use.

1.1.2 Types of noise

Replacement:

The methods specified in ISO 3743-2 and ISO 3744 can be used for measuring noise emitted by electric dry-cleaning robots.

1.1.3 Size of the source

Replacement:

The method specified in ISO 3744 is applicable to noise sources of any size. Limitations for the size of the source are given in Clause 5 of ISO 3743-2:2018. Although the dry-cleaning robot itself is a relatively small source, the covered floor area during the measurement comprises a much larger effective source.

1.2 Object

Addition:

This part of IEC 60704 describes the determination of the noise emission of dry-cleaning robots under normal operating conditions on carpet and hard floors.

NOTE 101 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 in accordance with this document, are given in Table 101.

Table 101 – Standard deviations of sound power levels¹

Standard deviation (dB)	
σ_r (repeatability)	σ_R (reproducibility)
0,4	1,2

Addition:

1.101 Standard deviation for declaration and verification

For the purpose of determining and verifying declared noise emission values in accordance with IEC 60704-3, the values are given in Table 102.

Table 102 – Standard deviations for declaration and verification¹

Standard deviation (dB)		
σ_P (production)	σ_t (total)	σ_M (reference)
1,0 to 1,5	2,0	2,0

2 Normative references

This clause of IEC 60704-1:2010 is applicable except as follows:

Addition:

IEC 60704-1:2010, *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – Part 1: General requirements*

IEC TS 62885-1, *Surface cleaning appliances – Part 1: General requirements on test material and test equipment*

Replacement:

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 and sound energy levels of noise sources using sound pressure – Engineering methods for an essentially free field over a reflecting plane*

¹ The values in the standard deviation tables will be further considered and improved.