

<b>STN</b>	<b>Elektrické spotrebiče pre domácnosť a na podobné účely</b> <b>Skúšobný predpis na stanovenie hluku prenášaného vzduchom</b> <b>Časť 2-17: Osobitné požiadavky na roboty na suché čistenie</b>	<b>STN</b> <b>EN IEC</b> <b>60704-2-17</b>  36 1005
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Household and similar electrical appliances - Test code for the determination of airborne acoustical noise - Part 2-17: Particular requirements for dry-cleaning robots

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/21

Obsahuje: EN IEC 60704-2-17:2020, IEC 60704-2-17:2020

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EUROPEAN STANDARD

**EN IEC 60704-2-17**

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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)

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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**

**EN IEC 60704-2-17:2020 (E)****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- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-12-02

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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 62885-7<sup>1</sup>

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<sup>1</sup> 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](http://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



IEC 60704-2-17

Edition 1.0 2020-10

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



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

**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**



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Edition 1.0 2020-10

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

**Appareils électrodomestiques et analogues – Code d'essai pour la détermination du bruit aérien –  
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## 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**

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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.

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## 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 levels<sup>1</sup>**

Standard deviation (dB)	
$\sigma_r$ (repeatability)	$\sigma_R$ (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 verification<sup>1</sup>**

Standard deviation (dB)		
$\sigma_P$ (production)	$\sigma_t$ (total)	$\sigma_M$ (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*

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