SLOVENSKI STANDARD
SIST EN 60704-2-14:2013/A1:2019

01-september-2019

Gospodinjski in podobni električni aparati - Postopek preskušanja za ugotavljanje zvočnega hrupa v zraku - 2-14. del: Posebne zahteve za hladilnike, zamrzovalne omare in zamrzovalnike - Dopolnilo A1

Household and similar electrical appliances - Test code for the determination of airborne acoustical noise - Part 2-14: Particular requirements for refrigerators, frozen-food storage cabinets and food freezers

Elektrische Geräte für den Hausgebrauch und ähnliche Zwecke - Prüfvorschrift für die Bestimmung der Luftschallemission - Teil 2-14: Besondere Anforderungen an Kühlgeräte, Tiefkühlgeräte und Gefriergeräte

Appareils électrodomestiques et analogues - code d'essai pour la détermination du bruit aérien - Partie 2-14: Exigences particulières pour les réfrigérateurs, conservateurs et congélateurs

Ta slovenski standard je istoveten z: **EN 60704-2-14:2013/A1:2019**

ICS:

17.140.20	Emisija hrupa naprav in opreme	Noise emitted by machines and equipment
97.040.30	Hladilni aparati za dom	Domestic refrigerating appliances

SIST EN 60704-2-14:2013/A1:2019 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60704-2-14:2013/A1

May 2019

ICS 17.140.20; 97.040.20

English Version

Household and similar electrical appliances - Test code for the determination of airborne acoustical noise - Part 2-14: Particular requirements for refrigerators, frozen-food storage cabinets and food freezers (IEC 60704-2-14:2013/A1:2019)

Appareils électrodomestiques et analogues - code d'essai pour la détermination du bruit aérien - Partie 2-14: Exigences particulières pour les réfrigérateurs, conservateurs et congélateurs (IEC 60704-2-14:2013/A1:2019)

Elektrische Geräte für den Hausgebrauch und ähnliche Zwecke - Prüfvorschrift für die Bestimmung der Luftschallemission - Teil 2-14: Besondere Anforderungen an Kühlgeräte, Tiefkühlgeräte und Gefriergeräte (IEC 60704-2-14:2013/A1:2019)

This amendment A1 modifies the European Standard EN 60704-2-14:2013; it was approved by CENELEC on 2019-05-03. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, 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 59M/104/FDIS, future IEC 60704-2-14/A1, prepared by SC 59M "Performance of electrical household and similar cooling and freezing 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 60704-2-14:2013/A1:2019.

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) 2020-02-03
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-05-03

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.

Endorsement notice

The text of the International Standard IEC 60704-2-14:2013/A1:2019 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 62552-1	NOTE	Harmonized as EN 62552-1[1]
IEC 62552-2	NOTE	Harmonized as EN 62552-2[2]
IEC 62552-3	NOTE	Harmonized as EN 62552-3[3]

[1] Under preparation. Stage at time of publication: prEN 62552-1:2018.

[2] Under preparation. Stage at time of publication: prEN 62552-2:2018.

[3] Under preparation. Stage at time of publication: prEN 62552-3:2018.

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.

Publication	Year	Title	EN/HD	Year
IEC 60038 (mod)	2009	IEC standard voltages	EN 60038	2011
IEC 60704-3	2006	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	EN 60704-3	2006
IEC 61260	1995	Electroacoustics - Octave-band and fractional-octave-band filters	EN 61260	1995
IEC 61672-1	2002	Electroacoustics - Sound level meters - Part 1: Specifications	-	-
ISO 3741	1999	Acoustics - Determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms	-	-
ISO 3743-1	2010	Acoustics - Determination of sound power levels and sound energy levels of noise sources using sound pressure - Engineering methods for small movable sources in reverberant fields - Part 1: Comparison method for a hard-walled test room	EN ISO 3743-1	2010
ISO 3743-2	1994	Acoustics - Determination of sound power levels of noise sources - Engineering methods for small, movable sources in reverberant fields using sound pressure -- Part 2: Methods for special reverberation test rooms	EN ISO 3743-2	2009
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

Publication	Year	Title	EN/HD	Year
ISO 3745	2003	Acoustics - Determination of sound power levels of noise sources using sound pressure - Precision methods for anechoic and hemi-anechoic rooms	-	-
ISO 6926	1999	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	EN ISO 12001	2009

IEC 60704-2-14

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 1
AMENDEMENT 1

Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – Part 2-14: Particular requirements for refrigerators, frozen-food storage cabinets and food freezers

Appareils électrodomestiques et analogues – Code d'essai pour la détermination du bruit aérien – Partie 2-14: Exigences particulières pour les réfrigérateurs, conservateurs et congélateurs

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

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FOREWORD

This amendment has been prepared by subcommittee 59M: Performance of electrical household and similar cooling and freezing appliances, of IEC technical committee 59: Performance of household and similar electrical appliances.

The text of this amendment is based on the following documents:

FDIS	Report on voting
59M/104/FDIS	59M/105/RVD

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

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the stability date indicated on the IEC website 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.

1.1.3 Size of the source

Replace the existing content with the following new content:

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 to ensure that the maximum size of the refrigerator, frozen-food storage cabinet or food freezer under test fulfils the requirements specified in 1.2 of ISO 3743-1:2010 and 1.3 of ISO 3743-2:1994.

2 Normative references

Replace the existing content with the following:

This clause of Part 1 is applicable except as follows:

Addition:

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

ISO 3744:2010, *Acoustics – Determination of sound power levels and sound energy levels of a noise sources using sound pressure – Engineering methods for an essentially free field over a reflecting pane*

3.101
running period

Replace the definition with the following new definition and Note 1 to entry:

for a refrigerator, frozen-food storage cabinet and food freezer, period which begins when the compressor turns on and ends when the compressor turns off

Note 1 to entry: If, however, the compressor runs for longer than 4 h, an aperiodic behaviour with no specific running period can be identified.

6.4.2

Replace NOTE 101 with the following new NOTE 101:

NOTE 101 This temperature is the air temperature and not the test temperature that is measured in test packages in accordance with IEC 62552-2. The air temperature of −22 °C approximately corresponds to a test package temperature of −18 °C.

7.1.3

Replace the existing content with the following new content:

For floor-standing cabinet-type appliances for placing against a wall, including built-in appliances of larger size with a height exceeding 2 d, but less than or equal 5 d, the measurement surface is a parallelepiped with 10 microphone positions, as specified in Figure 101. Additional measurement positions may be required in accordance with Clause C.1 of ISO 3744:2010. The number of microphone positions may also be reduced in accordance with Clause C.1 of ISO 3744:2010.

NOTE 101 The front of the appliance is directed in the direction of the x-axis.

The preferred value of the measurement distance d is 1 m.

For determining time histories, frequency spectra, etc. of the appliance, the microphone position no. 7 is recommended for the 10-microphone array.

7.4.1

Replace the existing content with the following new content:

The A-weighted time-averaged sound pressure level shall be measured from 1 min after the start of the running period to the end of this period. If no specific running period can be detected, the A-weighted, time-averaged sound pressure level shall be measured, starting from an arbitrary point in time within a running period. In this case, the duration of one measurement interval is 30 min.

To obtain the final result, three consecutive measurements shall be carried out on three consecutive running periods. In case of no specific running period can be detected, three consecutive measurements, which are regularly spaced by 15 min intervals, shall be performed within the same running period. If, in the case of aperiodic behaviour, the running period terminates (i.e. all compressors stop) prior to having finished all measurements needed, the complete measurement is void and shall be repeated within one running period.

The final result will be the logarithmic mean of these three measurements. If, however the difference between any two of the measurements exceeds 2 dB, three additional measurements shall be carried out, and the final result will be the logarithmic mean of the six measurements.