

Test code for the determination of airborne acoustical noise emitted by household and similar electrical appliances

Part 2. Particular requirements

Section 2.4 Washing machines and spin extractors

The European Standard EN 60704-2-4 : 1994 has the status of a British Standard

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee CPL/59, Performance of household electrical appliances, upon which the following bodies were represented:

Association of Manufacturers of Domestic Electrical Appliances
Consumer Policy Committee of BSI
Consumers' Association
Department of the Environment (Energy Efficiency Office)
Electricity Association
Portable Electric Tool Manufacturers' Association
Rotating Electrical Machines Association (BEAMA Ltd.)

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

International Wool Secretariat
Soap and Detergent Industry Association

This British Standard, having been prepared under the direction of the Electrotechnical Sector Board (L/1), was published under the authority of the Standards Board and comes into effect on 15 May 1995

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The following BSI references relate to the work on this standard:
Committee reference CPL/59
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National foreword

This British Standard has been prepared by Subcommittee CPL/59/4 and is the English language version of EN 60704-2-4 : 1994 *Test code for the determination of airborne acoustical noise emitted by household and similar electrical appliances. Part 2: Particular requirements for washing machines and spin extractors*, published by the European Committee for Electrotechnical Standardization (CENELEC). It is identical with IEC 704-2-4 : 1989 published by the International Electrotechnical Commission (IEC).

This standard should be read in conjunction with BS EN 60704-1 : 1995. It supplements or modifies the corresponding clauses of Part 1. When a particular subclause is not mentioned in this standard, the subclause in Part 1 is applicable. Where this standard states 'addition', 'modification' or 'replacement', the relevant requirement, test specification or explanatory matter in Part 1 should be amended accordingly.

This standard supersedes BS 6686 : Section 2.4 : 1991 which implemented CENELEC HD 423.2.4.S1 which is withdrawn.

This standard is related to Directive 86/594/EEC.

Cross-references

Publication referred to	Corresponding British Standard
IEC 704-1 : 1982	BS 6686 <i>Methods for determination of airborne acoustical noise emitted by household and similar electrical appliances</i> Part 1 : 1986 <i>General requirements for testing</i>
IEC 804 : 1985	BS 6698 : 1986 <i>Specification for integrating-averaging sound level meters</i>
ISO 3743 : 1988	BS 4196 <i>Sound power levels of noise sources</i> Part 3 : 1991 <i>Engineering methods for determination of sound power levels for sources in special reverberation test rooms</i>
ISO 3744 : 1981	Part 4 : 1981 <i>Engineering methods for determination of sound power levels for sources in free-field conditions over a reflecting plane</i>
ISO 3801 : 1977	BS 2471 : 1978 <i>Methods of test for textiles — woven fabrics — determination of mass per unit length and mass per unit area</i>
ISO 3932 : 1976	BS 1930 : 1990 <i>Methods for determination of width of woven or knitted fabrics when relaxed at zero tension</i>
ISO 7211/2 : 1984	BS 2862 : 1984 <i>Methods for determination of number of threads per unit length</i>

Product certification. Users of this British Standard are advised to consider the desirability of third party certification of product conformity with this British Standard based on testing and continuing surveillance, which may be coupled with assessment of a supplier's quality systems against the appropriate standard in the BS EN ISO 9000 series.

Enquiries as to the availability of third party certification schemes will be forwarded by BSI to the Association of British Certification Bodies. If a third party certification scheme does not already exist, users should consider approaching an appropriate body from the list of Association members.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

ICS 17.140.20

Descriptors: Acoustic, acoustical measurement, test code, airborne acoustical noise, noise of machinery, household electrical appliance, clothes washing machine, particular requirement

English version

Test code for the determination of airborne acoustical noise emitted by household and similar electrical appliances

Part 2 : Particular requirements for washing machines and spin extractors

(IEC 704-2-4 : 1989)

Code d'essai pour la détermination du bruit aérien émis par les appareils électrodomestiques et analogues
Deuxième partie: Règles particulières pour les machines à laver le linge et pour lesessoreuses centrifuges
(CEI 704-2-4 : 1989)

Prüfvorschrift für die Bestimmung der Luftschallemission von elektrischen Geräten für den Hausegebrauch und ähnliche Zwecke
Teil 2: Besondere Anforderungen an Waschmaschinen und Wäscheschleudern
(IEC 704-2-4 : 1989)

This European Standard was approved by CENELEC on 1994-07-05. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland,

CENELEC

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

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Foreword

At the request of CENELEC Technical Committee TC 59X, Consumer information related to household electrical appliances, HD 423.2.4 S1 : 1989 (IEC 704-2-4 : 1989) was submitted to the CENELEC voting procedure for conversion into a European Standard.

The text of the International Standard was approved by CENELEC as EN 60704-2-4 on 5 July 1994.

The following dates were fixed:

- latest date of publication
of an identical national
standard (dop) 1995-07-15
- latest date of withdrawal
of conflicting national
standards (dow) —

Annexes designated 'normative' are part of the body of the standard. Annexes designated 'informative' are given only for information. In this standard, annex AA is informative and annex ZA is normative.

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

Part 2: Particular requirements for washing machines and spin extractors

INTRODUCTION

The measuring conditions specified in this Part 2 simulate as far as possible the practical use of washing machines and spin extractors taking into account the steadiness of the noise emitted and reproducibility in different laboratories. The textile load is standardized on the basis of those used for measuring performance. To avoid unsteadiness caused by foaming, tests are carried out with unsoiled loads and without detergents or rinsing aids.

It is recommended to consider noise data as part of performance data.

Note.- As stated in the introduction to Publication 704-1, this code is concerned with airborne noise only; however, it is emphasized that for large household appliances, such as washing machines, the generation of noise by vibrations transmitted through floors, walls, etc. may contribute significantly to the noise burden experienced under practical conditions.

1. Scope and object

This clause of Part 1 is applicable except as follows:

1.1 Scope

Replacement:

This standard applies to single unit electric washing machines for household and similar use, and to spin extractors.

Limitations for the use of this test code are given in the scope clause of IEC Publication 704-1.

1.2 Object

Addition:

The object of this test code is to describe the procedure for the measurement of noise emitted by washing machines during the main wash and spin period (if any) as well as noise emitted by spin extractors.