

# INTERNATIONAL STANDARD

# IEC 60704-2-6

Second edition  
2003-01

---

---

**Household and similar electrical appliances –  
Test code for the determination of airborne  
acoustical noise –**

**Part 2-6:  
Particular requirements for tumble dryers**

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

*Partie 2-6:  
Règles particulières pour les sèche-linge à tambour*



Reference number  
IEC 60704-2-6:2003(E)

## Publication numbering

As from 1 January 1997 all IEC publications are issued with a designation in the 60000 series. For example, IEC 34-1 is now referred to as IEC 60034-1.

## Consolidated editions

The IEC is now publishing consolidated versions of its publications. For example, edition numbers 1.0, 1.1 and 1.2 refer, respectively, to the base publication, the base publication incorporating amendment 1 and the base publication incorporating amendments 1 and 2.

## Further information on IEC publications

The technical content of IEC publications is kept under constant review by the IEC, thus ensuring that the content reflects current technology. Information relating to this publication, including its validity, is available in the IEC Catalogue of publications (see below) in addition to new editions, amendments and corrigenda. Information on the subjects under consideration and work in progress undertaken by the technical committee which has prepared this publication, as well as the list of publications issued, is also available from the following:

- **IEC Web Site** ([www.iec.ch](http://www.iec.ch))

- **Catalogue of IEC publications**

The on-line catalogue on the IEC web site ([http://www.iec.ch/searchpub/cur\\_fut.htm](http://www.iec.ch/searchpub/cur_fut.htm)) enables you to search by a variety of criteria including text searches, technical committees and date of publication. On-line information is also available on recently issued publications, withdrawn and replaced publications, as well as corrigenda.

- **IEC Just Published**

This summary of recently issued publications ([http://www.iec.ch/online\\_news/justpub/jp\\_entry.htm](http://www.iec.ch/online_news/justpub/jp_entry.htm)) is also available by email. Please contact the Customer Service Centre (see below) for further information.

- **Customer Service Centre**

If you have any questions regarding this publication or need further assistance, please contact the Customer Service Centre:

Email: [custserv@iec.ch](mailto:custserv@iec.ch)  
Tel: +41 22 919 02 11  
Fax: +41 22 919 03 00

# INTERNATIONAL STANDARD

# IEC 60704-2-6

Second edition  
2003-01

---

---

## Household and similar electrical appliances – Test code for the determination of airborne acoustical noise –

### Part 2-6: Particular requirements for tumble-dryers

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

*Partie 2-6:  
Règles particulières pour les sèche-linge à tambour*

© IEC 2003 — Copyright - all rights reserved

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland  
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: [inmail@iec.ch](mailto:inmail@iec.ch) Web: [www.iec.ch](http://www.iec.ch)



Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

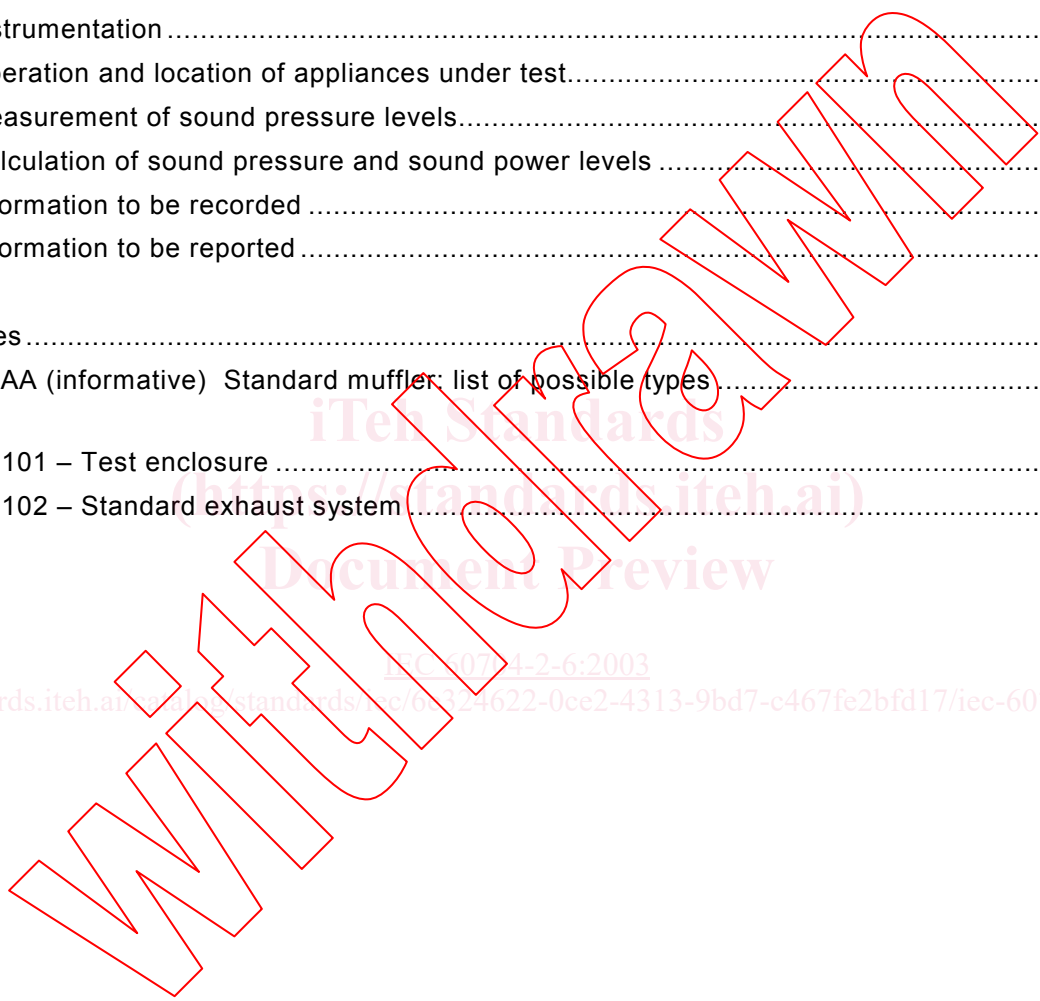
PRICE CODE

**N**

*For price, see current catalogue*

## CONTENTS

FOREWORD .....	3
INTRODUCTION .....	5
1 Scope and object .....	6
2 Normative references .....	7
3 Terms and definitions .....	7
4 Measurement methods and acoustical environments .....	8
5 Instrumentation .....	8
6 Operation and location of appliances under test .....	8
7 Measurement of sound pressure levels .....	11
8 Calculation of sound pressure and sound power levels .....	11
9 Information to be recorded .....	11
10 Information to be reported .....	11
Annexes .....	14
Annex AA (informative) Standard muffler: list of possible types .....	14
Figure 101 – Test enclosure .....	12
Figure 102 – Standard exhaust system .....	13



iTek Standards

(<https://standards.iteh.ai>)

Document Preview

IEC 60704-2-6:2003

<https://standards.iteh.ai/standards/iec/60704-2-6:2003>

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

**Part 2-6: Particular requirements for tumble dryers**

## FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60704-2-6 has been prepared by subcommittee 59D: Home laundry appliances, of IEC technical committee 59: Performance of household electrical appliances.

This second edition cancels and replaces the first edition published in 1994 and constitutes a technical revision.

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

FDIS	Report on Voting
59D/224/FDIS	59D/227/RVD

Full information on the voting for the approval of this 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 2-6 is intended to be used in conjunction with IEC 60704-1, 2nd edition 1997: *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – Part 1: General requirements.*

The relevant text of Part 1 as amended by this standard establishes the test code for tumble dryers.

This Part 2-6 supplements or modifies the corresponding clauses in IEC 60704-1. When a particular subclause of Part 1 is not mentioned in this part 2-6, 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 part 1 shall be adapted accordingly.

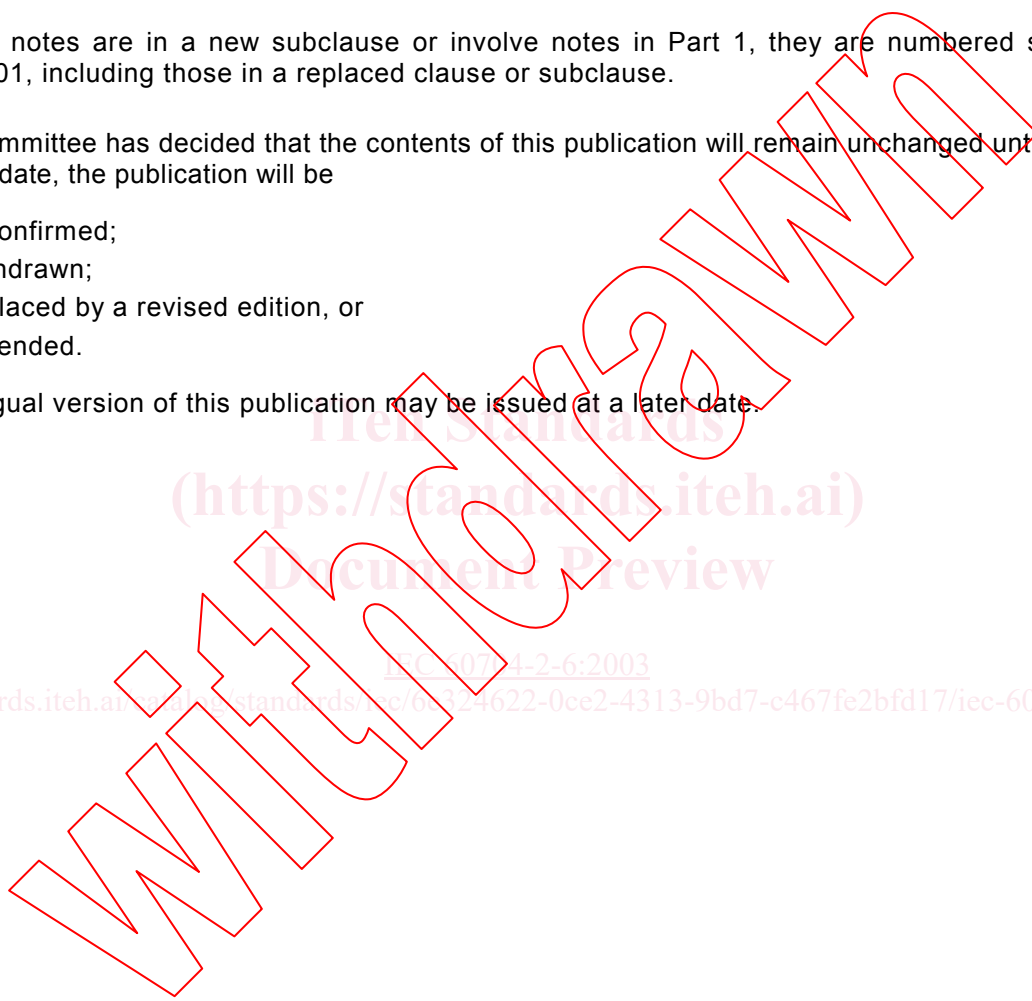
Subclauses or figures which are additional to those in Part 1 are numbered starting from 101. Additional annexes are lettered AA, BB, etc.

Unless notes are in a new subclause or involve notes in Part 1, they are numbered starting from 101, including those in a replaced clause or subclause.

The committee has decided that the contents of this publication will remain unchanged until 2005. At this date, the publication will be

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

A bilingual version of this publication may be issued at a later date.



iteh Standards  
(<https://standards.iteh.ai>)  
Document Preview

<https://standards.iteh.ai/standards/iec/60704-2-6:2003>

<https://standards.iteh.ai/standards/iec/60704-2-6:2003>

## INTRODUCTION

The measuring conditions specified in this part of IEC 60704 provide for sufficient accuracy in determining the levels of noise emitted and comparing the results of measurements taken by different laboratories, whilst simulating as far as possible the practical use of tumble dryers.

It is recommended to consider the determination of noise levels as part of a comprehensive testing procedure covering many aspects of properties and performance of household tumble dryers.

Compared to the first edition (1994) of this Part 2-6, the second edition considers the noise during a complete drying cycle.

NOTE As stated in the introduction to IEC 60704-1, this test code concerns airborne noise only.

Withstand

iTeh Standards  
(<https://standards.itih.ai>)  
Document Preview

<https://standards.itih.ai/standards/iec/60704-2-6:2003>

<https://standards.itih.ai/standards/iec/60704-2-6:2003>

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

## Part 2-6: Particular requirements for tumble dryers

### 1 Scope and object

This clause of Part 1 is applicable except as follows.

#### 1.1 Scope

##### 1.1.1 General

*Replacement:*

This standard applies to single unit electric tumble dryers for household and similar use intended for placing on the floor against a wall, for building in or placing under a counter, a kitchen work-top or under a sink, for wall-mounting or for mounting on a counter. For the purpose of this standard, washer-dryer combinations, when operated as a dryer, are considered as a tumble dryer.

Limitations for the use of this test code are given in 1.1.1 of IEC 60704-1.

##### 1.1.2 Types of noise

*Replacement:*

ISO 3743-1, ISO 3743-2 and ISO 3744 can all be used for measuring noise emitted by tumble dryers.

##### 1.1.3 Size of the source

*Replacement:*

The method specified in ISO 3744 is applicable to noise sources of any size. When applying ISO 3743-1 and ISO 3743-2, care shall be taken that the maximum size of the tumble dryer under test fulfils the requirements specified in 1.3 of ISO 3743-1 and ISO 3743-2.

#### 1.2 Object

*Addition:*

Requirements for the declaration of noise emission values are not within the scope of this standard.

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 according to this standard, are:



Standard deviation dB	
$\sigma_r$ (repeatability)	$\sigma_R$ (reproducibility)
0,4	0,8

*Addition:*

### 1.101 Standard deviation for declaration and verification

For the purpose of determining and verifying declared noise emission values, according to IEC 60704-3, the following values apply for the:

- standard deviation of production  $\sigma_P$ ;
- total standard deviation  $\sigma_t$ ;
- reference standard deviation  $\sigma_M$ .

Standard deviation dB		
$\sigma_P$	$\sigma_t$	$\sigma_M$
0,7 – 1,0	1,1 – 1,3	1,5

## 2 Normative references

This clause of Part 1 is applicable except as follows.

*Addition:*

IEC 61121:2000, *Tumble dryers for household use – Methods for measuring the performance*

ISO/3055:1985, *Kitchen equipment – Coordinating sizes*

ISO 7235:1991, *Acoustics – Measurement procedures for ducted silencers – Insertion loss, flow noise and total pressure loss*

## 3 Terms and definitions

This clause of Part 1 is applicable except as follows.

### 3.4 Operational cycle

*Addition:*

Start and end of the operational cycle are identical to those applied for energy and time measurements as defined in 9.2.1 of IEC 61121.

*Addition:*

#### 3.101 standard test programme for noise measurements

for the purposes of the present standard, the dry cotton programme according to 9.2.1 of IEC 61121

### 3.102

#### **standard test load for noise measurements**

the cotton test load for the same rated capacity and, with the same initial moisture content A or B, defined in 7.3.4 of IEC 61121.

NOTE New textile items should be washed as described in 7.3.2 of IEC 61121. An item should not be used more than 80 cycles after pre-treatment.

### 3.103

#### **cotton test load**

load as defined in 7.1.1 of IEC 61121

### 3.104

#### **rated capacity**

capacity as defined in 3.11 and 5 of IEC 61121

### 3.105

#### **initial moisture content**

moisture content achieved by wetting as described in 7.3.4. of IEC 61121

## 4 Measurement methods and acoustical environments

This clause of Part 1 is applicable except as follows.

### 4.1 General

*Addition:*

The noise emission of a tumble dryer is the value of the A-weighted time-averaged sound power level over the total duration of the operational cycle.

### 4.2 Direct method

*Addition:*

NOTE 101 If pure tone components are present in the noise emitted, proper precautions should be taken as specified in ISO 3743-2.

### 4.3 Comparison method

*Addition:*

NOTE 101 If pure tone components are present in the noise emitted, proper precautions should be taken as specified in ISO 3743-1 and ISO 3743-2.

## 5 Instrumentation

This clause of Part 1 is applicable.

## 6 Operation and location of appliances under test

This clause of Part 1 is applicable except as follows.

### 6.1 Equipping and pre-conditioning of appliances

#### 6.1.1 *Addition:*

Prior to noise measurement, filters if any, shall be cleaned according to the manufacturer's instructions.