

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Electric clothes washer-dryers for household use – Methods for measuring the performance

Lavantes-séchantes électriques à usage domestique – Méthodes de mesure de l'aptitude à la fonction



THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2012 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, 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 either IEC or IEC's member National Committee in the country of the requester.

If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de la CEI ou du Comité national de la CEI du pays du demandeur.

Si vous avez des questions sur le copyright de la CEI ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de la CEI de votre pays de résidence.

IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

Useful links:

IEC publications search - www.iec.ch/searchpub

The advanced search enables you to find IEC publications by a variety of criteria (reference number, text, technical committee,...).

It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished

Stay up to date on all new IEC publications. Just Published details all new publications released. Available on-line and also once a month by email.

Electropedia - www.electropedia.org

The world's leading online dictionary of electronic and electrical terms containing more than 30 000 terms and definitions in English and French, with equivalent terms in additional languages. Also known as the International Electrotechnical Vocabulary (IEV) on-line.

Customer Service Centre - webstore.iec.ch/csc

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: csc@iec.ch.

A propos de la CEI

La Commission Electrotechnique Internationale (CEI) est la première organisation mondiale qui élabore et publie des Normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

A propos des publications CEI

Le contenu technique des publications de la CEI est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

Liens utiles:

Recherche de publications CEI - www.iec.ch/searchpub

La recherche avancée vous permet de trouver des publications CEI en utilisant différents critères (numéro de référence, texte, comité d'études,...).

Elle donne aussi des informations sur les projets et les publications remplacées ou retirées.

Just Published CEI - webstore.iec.ch/justpublished

Restez informé sur les nouvelles publications de la CEI. Just Published détaille les nouvelles publications parues. Disponible en ligne et aussi une fois par mois par email.

Electropedia - www.electropedia.org

Le premier dictionnaire en ligne au monde de termes électroniques et électriques. Il contient plus de 30 000 termes et définitions en anglais et en français, ainsi que les termes équivalents dans les langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (VEI) en ligne.

Service Clients - webstore.iec.ch/csc

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions contactez-nous: csc@iec.ch.

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Electric clothes washer-dryers for household use – Methods for measuring the performance

Lavantes-séchantes électriques à usage domestique – Méthodes de mesure de l'aptitude à la fonction

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE
CODE PRIX

ICS 97.060

ISBN 978-2-83220-387-3

Warning! Make sure that you obtained this publication from an authorized distributor.
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.

CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
1 Scope.....	6
2 Normative references	6
3 Terms, definitions and symbols	6
3.1 Terms and definitions	6
3.2 Symbols	8
4 Requirements.....	8
5 Test conditions, materials, equipment and instrumentation	8
5.1 General.....	8
5.2 Ambient temperature and humidity	8
6 Preparation for testing	8
7 Performance measurements – General requirements	9
8 Tests for performance	9
8.1 Determination of the washing performance.....	9
8.2 Determination of the water extraction performance and rinsing performance	9
8.3 Determination of the water and energy consumption and programme time.....	9
8.3.1 General	9
8.3.2 Washing cycle	9
8.3.3 Drying cycle.....	9
8.3.4 Determination of energy consumption in "off" mode and "left on" mode	11
9 Assessment of performance	11
9.1 General.....	11
9.2 Determination of the airborne acoustical noise	12
10 Data to be reported	12
Annex A (normative) Splitting of the base load.....	13
Annex B (informative) Suggested forms in which the data are reported.....	14
Table 1 – List of symbols	8
Table A.1 – Composition of loads for rated capacities of 8 and 9 kg.....	13
Table A.2 – Corrected composition of load for a rated drying capacity of 8 kg.....	13

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRIC CLOTHES WASHER-DRYERS FOR HOUSEHOLD USE –
METHODS FOR MEASURING THE PERFORMANCE**

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.
- 2) The formal decisions or agreements of 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 IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International standard IEC 62512 has been prepared by subcommittee 59D: Home laundry appliances, of IEC Technical Committee 59: Performance of household and similar electrical appliances.

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

FDIS	Report on voting
59D/403/FDIS	59D/407/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.

Words in **bold** in the text are specifically defined in Clause 3.

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.

INTRODUCTION

This first edition has been developed to provide a globally applicable and agreed method to test the washing and drying function of washer-dryers.

Although this standard is based on IEC 61121:2012 on tumble dryers and IEC 60456:2010 on clothes washers, it specifies the conditions needed to test the combined function of washing and drying.

The main elements of this standard are:

- the definition of the loads to be tested in continuous and interrupted operation cycles;
- the method for testing automatic and not automatic operation of the drying cycles;
- the way to handle the load for interrupted operation cycles;
- the correction to be applied to test results for continuous and interrupted operation cycles.

ELECTRIC CLOTHES WASHER-DRYERS FOR HOUSEHOLD USE – METHODS FOR MEASURING THE PERFORMANCE

1 Scope

This International Standard specifies the test methods for the testing of household combined washer-dryers in their function to wash and dry textiles. This International Standard does not apply for testing individual washing or drying functions.

The object is to state and define the principal performance characteristics of household electric washer-dryers of interest to users and to describe standard methods for measuring these characteristics.

NOTE Washer-dryers for communal use in blocks of flats or in launderettes are also included within the scope of this standard. It does not apply to washer-dryers for commercial laundries.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60456:2010, *Clothes washing machines for household use – Methods for measuring the performance*

IEC 60704-2-4, *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise - Part 2-4: Particular requirements for washing machines and spin extractors*

IEC 60704-2-6, *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – Part 2-6: Particular requirements for tumble dryers*

IEC 61121:2012, *Tumble dryers for household use – Methods for measuring the performance*

ISO 80000-1:2009, *Quantities and units – Part 1: General*

3 Terms, definitions and symbols

For the purposes of this document, the terms and definitions given in IEC 60456:2010, as well as the following apply.

3.1 Terms and definitions

3.1.1

rated washing capacity

maximum mass of conditioned textiles, in kg, which the manufacturer declares can be treated in one complete **washing cycle**

3.1.2

rated drying capacity

maximum mass of conditioned textiles, in kg, which the manufacturer declares can be treated in one complete **drying cycle**