

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Surface cleaning appliances –
Part 2: Dry vacuum cleaners for household or similar use – Methods for
measuring the performance**

**Appareils de nettoyage des sols –
Partie 2: Aspirateurs à sec à usage domestique ou analogue – Méthodes de
mesure de l'aptitude à la fonction**



THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2021 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 l'IEC ou du Comité national de l'IEC du pays du demandeur. Si vous avez des questions sur le copyright de l'IEC ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de l'IEC de votre pays de résidence.

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

Tel.: +41 22 919 02 11
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 corrigendum or an amendment might have been published.

IEC publications search - webstore.iec.ch/advsearchform

The advanced search enables 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 It also gives information on projects, replaced and withdrawn publications.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 online collection - oc.iec.ch

Discover our powerful search engine and read freely all the publications previews. With a subscription you will always have access to up to date content tailored to your needs.

IEC Just Published - webstore.iec.ch/justpublished

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

Electropedia - www.electropedia.org

The world's leading online dictionary on electrotechnology, containing more than 22 000 terminological entries in English and French, with equivalent terms in 18 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online

IEC 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: sales@iec.ch.

A propos de l'IEC

La Commission Electrotechnique Internationale (IEC) 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 IEC

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

Recherche de publications IEC -

webstore.iec.ch/advsearchform

La recherche avancée permet de trouver des publications IEC 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.

IEC online collection - oc.iec.ch

Découvrez notre puissant moteur de recherche et consultez gratuitement tous les aperçus des publications. Avec un abonnement, vous aurez toujours accès à un contenu à jour adapté à vos besoins.

IEC Just Published - webstore.iec.ch/justpublished

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

Electropedia - www.electropedia.org

Le premier dictionnaire d'électrotechnologie en ligne au monde, avec plus de 22 000 articles terminologiques en anglais et en français, ainsi que les termes équivalents dans 16 langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (IEV) 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: sales@iec.ch.

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Surface cleaning appliances –
Part 2: Dry vacuum cleaners for household or similar use – Methods for
measuring the performance**

**Appareils de nettoyage des sols –
Partie 2: Aspirateurs à sec à usage domestique ou analogue – Méthodes de
mesure de l'aptitude à la fonction**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 97.080

ISBN 978-2-8322-1035-0

**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.....	8
1 Scope.....	10
2 Normative references	10
3 Terms and definitions	10
4 General conditions for testing	13
4.1 Atmospheric conditions	13
4.2 Test equipment and materials	14
4.2.1 General	14
4.2.2 Pile direction	14
4.3 Voltage and frequency	14
4.4 Running-in of dry vacuum cleaner	14
4.5 Equipment of the dry vacuum cleaner	15
4.6 Operation of the dry vacuum cleaner.....	15
4.6.1 General	15
4.6.2 Operation of water filter vacuum cleaners, additional requirements.....	16
4.7 Conditioning prior to each test	17
4.8 Mechanical operator	17
4.9 Number of samples	17
4.10 Carpets for testing	17
4.11 Stroke length and test area	18
4.12 Stroke speed	18
5 Dry vacuum cleaning tests.....	19
5.1 Dust removal from hard flat floors.....	19
5.1.1 Test equipment.....	19
5.1.2 Test area and stroke length	19
5.1.3 Removal of remaining dust	19
5.1.4 Distribution of test dust.....	19
5.1.5 Preconditioning of dust receptacle	19
5.1.6 Determination of dust removal ability	19
5.2 Dust removal from hard floors with crevices	20
5.2.1 General	20
5.2.2 Test surface and crevice.....	20
5.2.3 Distribution of test dust.....	20
5.2.4 Determination of dust removal ability	21
5.3 Debris removal from hard floors	21
5.3.1 Test equipment.....	21
5.3.2 Test surface	22
5.3.3 Distribution of debris.....	22
5.3.4 Determination of debris removal ability	22
5.4 Dust removal from carpets	23
5.4.1 General	23
5.4.2 Test carpet and equipment	23
5.4.3 Test area and stroke length	23
5.4.4 Conditioning of test carpet.....	23
5.4.5 Distribution of test dust.....	24
5.4.6 Embedding of dust into carpet	24
5.4.7 Preconditioning of dust receptacle	24

ITeH STANDARD PREVIEW
(standards.iteh.ai)

<https://standards.iteh.ai/standards/sist/dde0f00c-e66d-4927-aa39-6a3ecc8dbd9b/iec-62885-2-2021>

<https://standards.iteh.ai/standards/sist/dde0f00c-e66d-4927-aa39-6a3ecc8dbd9b/iec-62885-2-2021>

5.4.8	Determination of dust removal ability	24
5.5	Debris removal from carpet	25
5.5.1	Test equipment.....	25
5.5.2	Distribution of debris.....	26
5.5.3	Determination of debris removal ability	26
5.6	Dust removal along walls	27
5.6.1	Test equipment and materials	27
5.6.2	Distribution of test dust.....	27
5.6.3	Determination of dust removal ability along walls.....	27
5.7	Fibre removal from carpets	28
5.7.1	General	28
5.7.2	Test carpet	28
5.7.3	Distribution of fibres	28
5.7.4	Determination of fibre removal ability from carpets	29
5.8	Fibre removal from upholstery.....	30
5.8.1	General	30
5.8.2	Test cushion	31
5.8.3	Distribution of fibres	31
5.8.4	Determination of fibre removal ability from upholstery.....	32
5.9	Thread removal from carpets	33
5.9.1	Test carpet.....	33
5.9.2	Distribution of threads.....	33
5.9.3	Determination of thread removal ability.....	34
5.10	Maximum usable volume of the dust receptacle	34
5.10.1	General.....	34
5.10.2	Conditions for test	34
5.10.3	Introduction of moulding granules	35
5.10.4	Determination of maximum usable volume of dust receptacle	35
5.11	Air data	35
5.11.1	Purpose.....	35
5.11.2	Conditions for test	36
5.11.3	Test equipment.....	36
5.11.4	Mounting dry vacuum cleaner to test chamber for air data test.....	36
5.11.5	Determination of air data	37
5.12	Performance with loaded dust receptacle.....	38
5.12.1	Purpose.....	38
5.12.2	Determination of suction pressure change with loaded dust receptacle.....	38
5.12.3	Throttling to simulate loaded dust receptacle	40
5.12.4	Determination of performance with loaded dust receptacle	40
5.13	Total emissions while vacuum cleaning.....	41
5.13.1	Purpose.....	41
5.13.2	Test conditions	41
5.13.3	Test equipment.....	41
5.13.4	Test carpet	41
5.13.5	Test chamber setup and conditioning.....	41
5.13.6	Test sample and material setup	41
5.13.7	Positioning the test unit	42
5.13.8	Test procedure	42
5.13.9	Reporting.....	42

5.14	Dust re-emission and fractional filtration efficiency of the dry vacuum cleaner	43
5.14.1	General	43
5.14.2	Test conditions	43
5.14.3	Determining the test dust quantity.....	43
5.14.4	Dust re-emission for the entire range of particle size	43
5.14.5	Fractional filtration efficiency	49
6	Miscellaneous tests	51
6.1	General.....	51
6.2	Motion resistance.....	52
6.2.1	Purpose	52
6.2.2	Test carpet, hard floor surface, and test equipment	52
6.2.3	Determination of motion resistance	52
6.3	Cleaning under furniture	52
6.3.1	Purpose	52
6.3.2	Distribution of test dust.....	53
6.3.3	Determination of free furniture height.....	53
6.4	Radius of operation.....	53
6.4.1	Purpose	53
6.4.2	Conditions for measurement	53
6.4.3	Determination of radius of operation	53
6.5	Impact resistance for detachable cleaning heads	54
6.5.1	Purpose	54
6.5.2	Test equipment.....	54
6.5.3	Determination of impact resistance	54
6.6	Deformation of hose and connecting tubes	54
6.6.1	Purpose	54
6.6.2	Test equipment.....	54
6.6.3	Determination of permanent deformation	54
6.7	Bump test	55
6.7.1	Purpose	55
6.7.2	Test equipment.....	55
6.7.3	Test cycle	56
6.7.4	Test procedure	57
6.8	Flexibility of the hose	57
6.8.1	Purpose	57
6.8.2	Preparation of test object.....	57
6.8.3	Determination of the flexibility of the hose	58
6.9	Durability of suction hoses	58
6.9.1	Primary hose testing	58
6.9.2	Secondary hose testing	61
6.10	Ability to maintain air flow performance.....	61
6.10.1	Purpose	61
6.10.2	Test dust	62
6.10.3	Procedure.....	62
6.11	Mass.....	62
6.12	Weight in hand.....	62
6.13	Specific cleaning time	63
6.14	Dimensions	63
6.15	Airborne acoustical noise	63

6.16	Energy consumption	63
6.16.1	General	63
6.16.2	Energy consumption when vacuuming carpets	64
6.16.3	Energy consumption with vacuuming of hard floors and hard floors with crevices	66
6.16.4	Energy consumption of cordless active nozzles	66
6.17	Operational motor life-time test	68
6.17.1	Purpose	68
6.17.2	Procedure	68
7	Test material and equipment	69
7.1	General	69
7.2	Material for tests	69
7.2.1	Test carpets	69
7.2.2	Mineral dust – Type 4	69
7.2.3	Fibre material	69
7.2.4	Thread material	70
7.2.5	Moulding granules	70
7.2.6	Test cushion	70
7.2.7	Debris	70
7.3	Equipment for tests	71
7.3.1	Floor test plate	71
7.3.2	Test plate with crevice	71
7.3.3	Carpet-beating machine	71
7.3.4	Hold-downs and guides	72
7.3.5	Mechanical dust spreader (optional)	72
7.3.6	Rollers for embedding	73
7.3.7	Equipment for air data test	74
7.3.8	Test equipment for determining the fractional filtration efficiency and dust re-emission of the dry vacuum cleaner	80
7.3.9	Device for motion resistance test	85
7.3.10	Device for impact test	85
7.3.11	Device for determination of deformation of hoses and connecting tubes	86
7.3.12	Mechanical operator	87
7.3.13	Weighing machine	88
7.3.14	Total emissions test	88
7.3.15	Dust collection box	89
7.3.16	Secondary hose test equipment	90
8	Instructions for use	91
	Annex A (informative) Information on materials	92
	Annex B (informative) Information at the point of sale	93
	Annex C (informative) Reference vacuum cleaner system RSB	94
	C.1 Purpose of the RSB	94
	C.2 General description of the RSB	94
	C.3 Specification of the RSB	95
	C.4 Installation and use of the RSB	96
	C.5 Use of RSB for correction of DPU values	96
	Annex D (informative) Maintenance of the RSB	97
	D.1 Procedure for the adjustment at the manufacturer SLG	97
	D.2 Correction method for adjustment	97

D.3	Recorded DPU values at re-adjustment.....	98
D.4	Procedure for checking the air-technical data by the user	99
Annex E (normative)	Hard floorboard realization, floor support and floor pattern	101
Annex F (informative)	Maximum operational power	103
Bibliography.....		104
Figure 1	– Right-angled T	27
Figure 2	– Determination of cleaning area.....	28
Figure 3	– Stencil for distribution of fibres on test carpets.....	29
Figure 4	– Zigzag stroke pattern	30
Figure 5	– Frame for test cushion	31
Figure 6	– Stencil for distribution of fibres on upholstery.....	32
Figure 7	– Arrangement of threads in the thread removal test	33
Figure 8	– Stroke length in tests	34
Figure 9	– Air data curves.....	37
Figure 10	– Connecting tube opening.....	38
Figure 11	– Test dust for loading dust receptacle.....	39
Figure 12	– Insertion depth.....	53
Figure 13	– Position of test object and cross-section for measurement of deformation.....	55
Figure 14	– Profile of threshold (standards.itech.ai).....	56
Figure 15	– Arrangements for bump test	56
Figure 16	– Preparation of hoses for testing flexibility.....	58
Figure 17	– Configurations of vacuum cleaners with primary or secondary hoses	59
Figure 18	– Interconnecting hose.....	60
Figure 19	– Equipment for repeated bending of hoses	60
Figure 20	– Test plate with crevice.....	71
Figure 21	– Carpet-beating machine	72
Figure 22	– Carpet hold-downs and guides	73
Figure 23	– Dust spreader and roller for embedding dust into carpets.....	73
Figure 24	– Alternative A equipment for air data tests.....	74
Figure 25	– Measuring box for alternative A.....	75
Figure 26	– Alternative B equipment for air data tests.....	77
Figure 27	– Test hood.....	81
Figure 28	– Intake aerosol channel with sampling probe	82
Figure 29	– Exhaust channel with sampling probe.....	82
Figure 30	– Equipment diagram for filtration / dust re-emission testing.....	83
Figure 31	– Modified test hood.....	84
Figure 32	– Drum for impact test.....	86
Figure 33	– Device for testing deformation of hoses and connecting tubes.....	87
Figure 34	– Mechanical operator for the measurement of dust removal from carpets and of motion resistance.....	88
Figure 35	– Dust collection box.....	90
Figure 36	– Equipment for durability testing of secondary hoses	91
Figure C.1	– RSB with passive and active nozzle and vacuum measuring box	95

Figure E.1 – Dimensions of the floorboard and mounting on a test rig	101
Figure E.2 – Pattern of hard floor planks	102
Table 1 – Confidence limits of a Poisson distribution for 95 % confidence range	48
Table 2 – Nominal diameters of orifices	77
Table 3 – Graduation of eight size classes for particle sizes 0,3 µm to 10 µm	85

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[IEC 62885-2:2021](https://standards.iteh.ai/catalog/standards/sist/dde0f00c-e66d-4927-aa39-6a3ecc8dbd9b/iec-62885-2-2021)

<https://standards.iteh.ai/catalog/standards/sist/dde0f00c-e66d-4927-aa39-6a3ecc8dbd9b/iec-62885-2-2021>

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SURFACE CLEANING APPLIANCES –

Part 2: Dry vacuum cleaners for household or similar 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. (standards.iteh.ai)
- 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. <https://standards.iteh.ai/catalog/standards/sist/dde0f00c-e66d-4927-aa39-57f628820a12>
- 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 62885-2 has been prepared by subcommittee 59F: Surface cleaning appliances, of IEC technical committee 59: Performance of household and similar electrical appliances.

This second edition of IEC 62885-2 cancels and replaces the first edition published in 2016. This edition constitutes a technical revision.

This second edition includes the following significant technical changes with respect to the previous edition:

- a) Inclusion of requirements for **water filter vacuum cleaners** throughout document
- b) Clause 4.6 on operation of the **dry vacuum cleaner** has been revised.
- c) Add new paragraph 4.11, consolidating test area and **stroke length** from 5.1.2, 5.3.2, 6.2.2 and 6.16.2.2. Added new 4.12 for **stroke speed**.
- d) Added debris pick-up test for hard floor and carpet. Includes new Annex E.

- e) Clause 6.2.2 – Clarification of the carpet to be used; reference 4.11 for test area. Remove restriction limiting carpets to motion resistance only. Clarify the use of a mechanical operator.
- f) A durability test for secondary hoses has been included.
- g) The informative annexes relating to the description and maintenance of the **reference vacuum cleaner system RSB** have been updated.

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

Draft	Report on voting
59F/434/FDIS	59F/438/RVD

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

The language used for the development of this International Standard is English.

A list of all the parts in the IEC 62885 series, under the general title *Surface cleaning appliances*, can be found on the IEC website.

In this standard, the following print types are used:

- terms defined in Clause 3: **bold type**.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

<https://standards.iteh.ai/catalog/standards/sist/dde0f00c-e66d-4927-aa39-6e3cc9b140b/iec-62885-2-2021>

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

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

IMPORTANT – The "colour inside" logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this publication using a colour printer.

SURFACE CLEANING APPLIANCES –

Part 2: Dry vacuum cleaners for household or similar use – Methods for measuring the performance

1 Scope

This part of IEC 62885 is applicable for measurements of the performance of mains-operated **dry vacuum cleaners**, including **water filter vacuum cleaners** for household or similar use.

NOTE 1 Measurements of the performance of mains-operated commercial **dry vacuum cleaners** are found in IEC 62885-8.

The purpose of this document is to specify essential performance characteristics of **dry vacuum cleaners** which are of interest to users and to describe methods for measuring these characteristics.

NOTE 2 Due to the influence of environmental conditions, variations in time, origin of test materials and proficiency of the operator, some of the described test methods will give more reliable results when applied for comparative testing of a number of appliances at the same time, in the same laboratory and by the same operator.

NOTE 3 The methods here can be applied with modifications for surface-cleaning product types or technologies not currently covered within the scope.

For safety requirements, reference is made to IEC 60335-1.

A recommendation on information for the consumer at the point of sale is given in Annex B.

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 60688, *Electrical measuring transducers for converting A.C. and D.C. electrical quantities to analogue or digital signals*

IEC 60704-2-1, *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – Part 2-1: Particular requirements for vacuum cleaners*

IEC TS 62885-1:2020, *Surface cleaning appliances – Part 1: General requirements on test material and test equipment*

ISO 5167-1, *Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full – Part 1: General principles and requirements*

ISO 12103-1, *Road vehicles – Test dust for filter evaluation – Part 1: Arizona test dust*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

active depth of the cleaning head

distance from the front edge of the **cleaning head** to its rear edge or a line 10 mm behind the rear edge of the suction opening on the underside of the **cleaning head**, whichever is the shortest

3.2

active nozzle

cleaning head provided with a driven agitation device to assist dirt removal

Note 1 to entry: The agitation device can be driven by an incorporated electric motor (motorized nozzle), an incorporated turbine powered by the air flow (air-turbine nozzle), or an incorporated friction or gear mechanism actuated by moving the **cleaning head** over the surface to be cleaned (mechanical nozzle).

3.3

cleaning head

plain nozzle or brush attached to a connecting **tube**, or a power nozzle, separate or part of the cleaner housing, and that part of a **dry vacuum cleaner** which is applied to a surface to be cleaned

iTeh STANDARD PREVIEW
(standards.iteh.ai)

3.4

cleaning head width

B

external maximum width of the **cleaning head** in metres

<https://standards.iteh.ai/catalog/standards/sist/dde0f00c-e66d-4927-aa39-6a3ecc8dbd9b/iec-62885-2-2021>

3.5

cordless active nozzle

cleaning head provided on a mains-operated machine with an agitation device to assist dirt removal driven by a battery-operated motor

3.6

cylinder vacuum cleaner

portable **dry vacuum cleaner** having a nozzle separated from the cleaner housing by a hose; in use, only the nozzle is guided over the surface area to be cleaned

Note 1 to entry: These **dry vacuum cleaners** are generally floor-supported.

Note 2 to entry: The **dry vacuum cleaner** can have detachable passive or **active nozzles**, attachments, and **tubes** for both floor and above the floor cleaning.

3.7

double stroke

one forward and one backward movement of the **cleaning head** performed according to the appropriate **stroke pattern**

3.8

dry vacuum cleaner

electrically operated appliance that removes dry material (for example, dust, fibre, threads) from the surface to be cleaned by an air flow created by a vacuum developed within the unit, the removed material being separated in the appliance and the cleaned suction air being returned to the ambient air

3.9

forward stroke

forward movement of a **stroke pattern**

Note 1 to entry: On test carpets, **forward strokes** are carried out in the direction of the carpet pile.

3.10

hand-held cleaner

dry vacuum cleaner that will not be used on the floor by the user from an erect standing position

Note 1 to entry: The hand-held **dry vacuum cleaner** can also be used on stairs from a standing position.

3.11

hybrid vacuum cleaner

dry vacuum cleaner that can be either mains and/or battery-operated

3.12

in-house reference vacuum cleaner

electrically operated laboratory equipment designated for internal comparison within a laboratory

3.13

maximum operational power

power level that the machine is not capable of exceeding in any operating condition set either by the user or automatically by the appliance

3.14

parallel pattern

stroke pattern where the **forward strokes** and the **return strokes** are congruent and are carried out in the direction of the carpet pile (direction of manufacture) unless otherwise specified

3.15

passive nozzle

cleaning head without any driven agitation device

3.16

reference vacuum cleaner system RSB

electrically operated laboratory equipment intended to provide different laboratories with a similarly constructed vacuum cleaner to measure the reference dust removal ability on carpets for passive and **active nozzles** to improve the reproducibility of results

Note 1 to entry: The **reference vacuum cleaner system RSB** may be used with active or **passive nozzles**.

Note 2 to entry: The **reference vacuum cleaner system RSB** is not intended for tests other than dust pick-up from Wilton test carpets.

Note 3 to entry: The **reference vacuum cleaner system RSB** is described in Annex C. Maintenance of the RSB is described in Annex D.

Note 4 to entry: The **reference vacuum cleaner system RSB** is required for measurements in accordance with legislation in the European Union.

3.17

return stroke

backward movement of a **stroke pattern**

3.18

self-propelled cleaning head

cleaning head provided with a propulsion mechanism

3.19

stroke

single traverse of the **cleaning head** over the **test area**

3.20

stroke length

distance between the two parallel lines defining the limits of a **stroke pattern**

3.21**stroke pattern**

arrangement of the **forward strokes** and **return strokes** on the surface to be cleaned

3.22**stroke speed**

speed of the **cleaning head**, moved as uniformly as possible, during a **forward stroke** or a **return stroke**

3.23**test**

entirety or superset of all **trials** and **trial** batches of all samples to be measured for a single **vacuum cleaner** model

3.24**trial**

single instance of a performance measurement carried out under identical conditions that can be repeated multiple times

3.25**tube**

rigid length or lengths of hollow pipe that connect the end of the hose to various vacuum cleaner accessories

Note 1 to entry: The **tube** may be of fixed length, in multiple parts or telescopic, passive or energized.

3.26**upright vacuum cleaner**

self-standing and floor-supported **dry vacuum cleaner** with the **cleaning head** forming an integral part of, or permanently connected to, the cleaner housing, the **cleaning head** normally being provided with an agitation device to assist dirt removal and the complete cleaner housing being moved over the surface to be cleaned by means of an attached handle

3.27**water filter vacuum cleaner**

dry vacuum cleaner that uses water as the main filter medium, whereby the suction air is forced through the water entrapping the removed dry material as it passes through

3.28**water filter system**

removable water filter components that are in contact with the water

4 General conditions for testing**4.1 Atmospheric conditions**

Unless otherwise specified, the **test** procedures and measurements shall be carried out under the following conditions:

Standard atmosphere 23/50

Temperature: (23 ± 2) °C

Relative humidity: (50 ± 5) %

Absolute air pressure: 91,3 kPa to 106,3 kPa

Temperature and humidity conditions within the specified ranges are required for good repeatability and reproducibility. Care should be taken to avoid changes during a **test**.