

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Surface cleaning appliances –
Part 9: Floor treatment machines with or without traction drive, for commercial
use – Methods for measuring the performance**

**Appareils de nettoyage des sols –
Partie 9: Machines de traitement des sols avec ou sans commande de dispositif
de déplacement, à usage commercial – Méthodes de mesure de l'aptitude à la
fonction**



THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2019 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 It also gives information on projects, replaced and withdrawn publications.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 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.

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.

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 16 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

IEC Glossary - std.iec.ch/glossary

67 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

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 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.

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.

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.

Glossaire IEC - std.iec.ch/glossary

67 000 entrées terminologiques électrotechniques, en anglais et en français, extraites des articles Termes et Définitions des publications IEC parues depuis 2002. Plus certaines entrées antérieures extraites des publications des CE 37, 77, 86 et CISPR de l'IEC.

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Surface cleaning appliances –

Part 9: Floor treatment machines with or without traction drive, for commercial use – Methods for measuring the performance

Appareils de nettoyage des sols –

Partie 9: Machines de traitement des sols avec ou sans commande de dispositif de déplacement, à usage commercial – Méthodes de mesure de l'aptitude à la fonction

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 97.080

ISBN 978-2-8322-7419-4

**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.....	5
1 Scope.....	7
2 Normative references	7
3 Terms, definitions and abbreviated terms	7
3.1 Terms and definitions.....	7
3.2 Abbreviated terms.....	8
4 General conditions for testing	8
4.1 Atmospheric conditions	8
4.2 Machine loading.....	8
4.3 Machine set-up	8
5 Working path width	9
5.1 Working scrubbing path width	9
5.2 Total pad/brush width.....	9
5.3 Maximum squeegee width.....	9
5.4 Minimum working sweeping path width.....	9
5.5 Maximum working sweeping path width.....	9
5.6 Measurement method	9
5.7 Reporting	9
6 Minimum aisle turn-around width	9
6.1 General.....	9
6.2 Measurement method	10
6.3 Reporting	10
7 Machine transport width.....	10
7.1 General.....	10
7.2 Measurement method	10
7.3 Reporting	10
8 Weight.....	10
8.1 Gross vehicle weight (GVW) taken from IEC 60335-2-72:2016.....	10
8.2 Empty weight	10
8.3 Transportation weight	11
8.4 Reporting.....	11
9 Maximum scrub deck down force	11
9.1 General.....	11
9.2 Measurement method	11
9.3 Reporting.....	11
10 Maximum scrub deck down pressure	12
10.1 General.....	12
10.2 Determination method.....	12
10.3 Reporting.....	12
11 Rotational speed of pads, brushes and brooms	12
11.1 General.....	12
11.2 Measurement method – unloaded operation.....	12
11.3 Measurement method – loaded operation.....	12
11.4 Reporting.....	13
12 Maximum floor load and wheel contact pressure.....	13
12.1 General.....	13

12.2	Measurement method	13
12.3	Reporting	13
13	Speed	13
13.1	Maximum transport mode speed (power-driven machines)	13
13.2	Maximum working mode speed	13
13.3	Measurement method	13
13.4	Reporting	13
14	Sound	13
14.1	Sound power level	13
14.2	Sound pressure Level	14
14.3	Measurement method	14
14.4	Reporting	14
15	Vibration	14
15.1	Hand-arm system vibration total value	14
15.2	Whole-body vibration total value	14
15.3	Measurement method	14
15.4	Reporting	14
16	Solution flow rate	14
16.1	General	14
16.2	Measurement method	14
16.3	Reporting	14
17	Rated hopper volume capacity	15
17.1	General	15
17.2	Measurement method	15
17.3	Reporting	15
18	Tank capacity – solution tank and recovery tank	15
18.1	General	15
18.2	Measurement method – solution tank	15
18.3	Measurement method – recovery tank	15
18.4	Reporting	15
19	Recovery tank drain time	16
19.1	General	16
19.2	Measurement method	16
19.3	Reporting	16
20	Water coverage test	16
20.1	General	16
20.2	Machine preparation	16
20.3	Measurement method	16
20.4	Reporting	17
21	Battery amp-hour capacity	17
21.1	General	17
21.2	Reporting	17
22	Calculated battery-powered – (max.) machine run time	17
22.1	Calculation of nominal current consumption	17
22.2	Maximum net run-time	18
23	Rated power	18
23.1	Rated power for combustion engines (output power)	18

23.2	Rated power input.....	18
23.3	Rated power for electric motors	18
23.4	Reporting	19
24	Air flow of sweeping/scrubbing machines.....	19
24.1	General.....	19
24.2	Measurement methods.....	19
24.3	Reporting	19
25	Maximum vacuum.....	19
25.1	General.....	19
25.2	Measurement method	19
25.3	Reporting	19
26	Filter area.....	19
26.1	General.....	19
26.2	Measurement method	20
26.3	Reporting	20
27	Productivity	20
Annex A	(normative) Evaluation of wheel contact pressure on hard floors and floor loading of floor cleaning machines.....	21
A.1	Mean pressure of wheels	21
A.2	Weight of the operable machine.....	21
A.3	Evaluation of mean wheel contact pressure	21
A.4	Evaluation of the working load	22
A.5	Data sheet	23
Bibliography	24
Figure A.1	– Method for evaluating a wheel footprint.....	22
Figure A.2	– Method for evaluating the footprint of double-castors	22

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SURFACE CLEANING APPLIANCES –

**Part 9: Floor treatment machines with or without traction drive,
for commercial 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 62885-9 has been prepared by subcommittee SC 59F: Surface cleaning appliances, of IEC technical committee TC 59: Performance of household and similar electrical appliances.

This first edition of IEC 62885-9 cancels and replaces IEC 62826:2014 and constitutes a technical revision.

This edition includes the following significant technical changes with respect to IEC 62826:2014

- a) reference to a dated version of IEC 60335-2-72 to ensure consistency between the two standards;
- b) a new calculation for the nominal current consumption in 22.1;
- c) a new calculation for the maximum net run-time of commercial floor treatment machines in 22.2;
- d) update of the Bibliography.

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

CDV	Report on voting
59F/359/CDV	59F/371/RVC

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.

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

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.

SURFACE CLEANING APPLIANCES –

Part 9: Floor treatment machines with or without traction drive, for commercial use – Methods for measuring the performance

1 Scope

This part of IEC 62885 lists the characteristic performance parameters for walk-behind and ride-on floor scrubbers and sweepers and other floor cleaning machines in accordance with IEC 60335-2-72:2016.

The intent is to serve the manufacturers in describing parameters for their manuals and their literature. This may include all or some of the parameters listed in this definition document.

2 Normative references

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.

IEC 60335-1:2010, *Household and similar electrical appliances – Safety – Part 1: General requirements*

IEC 60335-1:2010/AMD 1:2013¹

IEC 60335-2-69, *Household and similar electrical appliances – Safety – Part 2-69: Particular requirements for wet and dry vacuum cleaners, including power brush, for commercial use*

IEC 60335-2-72:2016, *Household and similar electrical appliances – Safety – Part 2-72: Particular requirements for floor treatment machines with or without traction drive, for commercial use*

ISO 1585, *Road vehicles – Engine test code – Net power*

EN 12281, *Printing and business paper – Requirements for copy paper for dry toner imaging processes*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions of IEC 60335-2-72:2016 and the following 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>

¹ There exists a consolidated edition 5.1 (2013) that comprises edition 5 (2010) and its Amendment 1 (2013).