

INTERNATIONAL STANDARD

NORME INTERNATIONALE



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

**Appareils électrodomestiques et analogues – Sécurité –
Partie 2-72: Exigences particulières pour les machines de traitement des sols
avec ou sans commande de dispositif de déplacement, à usage commercial**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –
SAFETY –****Part 2-72: Particular requirements for floor treatment machines
with or without traction drive, for commercial use****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.
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International Standard IEC 60335-2-72 has been prepared by subcommittee 61J: Electrical motor-operated cleaning appliances for commercial use, of IEC technical committee 61: Safety of household and similar electrical appliances.

This fourth edition cancels and replaces the third edition published in 2012. It constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition (minor changes are not listed):

- the title has been changed for better distinction with regard to IEC 60335-2-67;
- the scope has been revised editorially to avoid misunderstandings;
- Clause 3 has been revised with regard to the requirements revised;

- the standard has been revised in general and updated regarding state-of-the-art, as far as necessary, in particular some changes have been made to Clauses 15, 22, and 25;
- the markings and instructions (Clause 7) have been revised basically;
- a new Annex DD 'Emission of acoustical noise' was added; and
- a new Annex EE 'Emission of vibration' was added.

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

FDIS	Report on voting
61J/625/FDIS	61J/636/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 is to be used in conjunction with the latest edition of IEC 60335-1 and its amendments. It was established on the basis of the fifth edition (2010) of that standard.

NOTE 1 When “Part 1” is mentioned in this standard, it refers to IEC 60335-1.

This part 2 supplements or modifies the corresponding clauses in IEC 60335-1, so as to convert that publication into the IEC standard: Safety requirements for floor treatment machines with or without traction drive, for commercial use.

When a particular sub clause of Part 1 is not mentioned in this part 2, that subclause applies as far as is reasonable. When this standard states “addition”, “modification” or “replacement”, the relevant text in Part 1 is to be adapted accordingly.

NOTE 2 The following numbering system is used:

- subclauses, tables and figures that are numbered starting from 101 are additional to those in Part 1;
- unless notes are in a new sub clause or involve notes in Part 1, they are numbered starting from 101, including those in a replaced clause or sub clause;
- additional annexes are lettered AA, BB, etc.

NOTE 3 The following print types are used:

- requirements: in roman type;
- *test specifications: in italic type;*
- notes: in small roman type.

NOTE 4 The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations may need a transitional period following publication of a new, amended or revised IEC publication in which to make products in accordance with the new requirements and to equip themselves for conducting new or revised tests.

It is the recommendation of the committee that the content of this publication be adopted for implementation nationally not earlier than 12 months or later than 36 months from the date of publication.

The following differences exist in the countries indicated below.

- Annex AA: The CO-emission of LPG driven machines, intended to be used indoors, has to comply with the value specified in Annex BB. The result shall be documented (Germany).
- Annex BB: For machines intended to be used indoors, except single cylinder engines, the exhaust gas shall not contain more than 0,1 % volume of carbon monoxide (CO). If adjustments are necessary, the adjusting means shall be easily accessible. The measurement shall be carried out with a warm engine, idling, using 98 % propane. The revolution speed of the engine shall be documented (Germany).

Words in **bold** in the text are defined in Clause 3. When a definition concerns an adjective, the adjective and the associated noun are also in bold.

A list of all parts of the IEC 60335 series, under the general title: *Household and similar electrical appliances – Safety*, 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 website 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.

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INTRODUCTION

It has been assumed in the drafting of this International Standard that the execution of its provisions is entrusted to appropriately qualified and experienced persons.

This standard recognizes the internationally accepted level of protection against hazards such as electrical, mechanical, thermal, fire and radiation of appliances when operated as in normal use taking into account the manufacturer's instructions. It also covers abnormal situations that can be expected in practice and takes into account the way in which electromagnetic phenomena can affect the safe operation of appliances.

This standard takes into account the requirements of IEC 60364 as far as possible so that there is compatibility with the wiring rules when the appliance is connected to the supply mains. However, national wiring rules may differ.

If an appliance within the scope of this standard also incorporates functions that are covered by another part 2 of IEC 60335, the relevant part 2 is applied to each function separately, as far as is reasonable. If applicable, the influence of one function on the other is taken into account.

When a part 2 standard does not include additional requirements to cover hazards dealt with in Part 1, Part 1 applies.

NOTE 1 This means that the technical committees responsible for the part 2 standards have determined that it is not necessary to specify particular requirements for the appliance in question over and above the general requirements.

This standard is a product family standard dealing with the safety of appliances and takes precedence over horizontal and generic standards covering the same subject.

NOTE 2 Horizontal and generic standards covering a hazard are not applicable since they have been taken into consideration when developing the general and particular requirements for the IEC 60335 series of standards. For example, in the case of temperature requirements for surfaces on many appliances, generic standards, such as ISO 13732-1 for hot surfaces, are not applicable in addition to Part 1 or part 2 standards.

An appliance that complies with the text of this standard will not necessarily be considered to comply with the safety principles of the standard if, when examined and tested, it is found to have other features that impair the level of safety covered by these requirements.

An appliance employing materials or having forms of construction differing from those detailed in the requirements of this standard may be examined and tested according to the intent of the requirements and, if found to be substantially equivalent, may be considered to comply with the standard.

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-72: Particular requirements for floor treatment machines with or without traction drive, for commercial use

1 Scope

This clause of Part 1 is replaced by the following.

This International Standard deals with the safety of powered ride-on and powered **walk-behind machines** intended for commercial indoor or outdoor use for the following applications:

- sweeping,
- scrubbing,
- wet or dry pick-up,
- polishing,
- application of wax, sealing products and powder based detergents,
- shampooing

of floors with an artificial surface.

Their cleaning motion is more linear than lateral or periodic.

NOTE 101 By contrast, the cleaning motion of machines covered by IEC 60335-2-67 is more lateral or periodic than linear.

NOTE 102 This standard applies to machines for **commercial use**. The following list, although not comprehensive, gives an indication of locations that are included in the scope:

- public use areas such as hotels, schools, hospitals;
- industrial locations, for example factories and manufacturing shops;
- retail outlets, for example shops and supermarkets;
- business premises, for example offices and banks;
- all uses other than normal housekeeping purposes.

They may be equipped with a **traction drive** system. The following power systems are covered:

- internal combustion engines,
- mains powered motors up to a **rated voltage** of 250 V for single-phase appliances and 480 V for other appliances,
- battery powered motors.

Battery powered machines may be equipped with a built-in battery charger.

This standard does not apply to

- floor treatment appliances for household use (IEC 60335-2-10);
- floor treatment machines for **commercial use** (IEC 60335-2-67);
- spray extraction machines for **commercial use** (IEC 60335-2-68);