

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Household and similar electrical appliances – Safety –
Part 2-67: Particular requirements for floor treatment machines, for
commercial use**

**Appareils électrodomestiques et analogues – Sécurité –
Partie 2-67: Exigences particulières pour les machines de traitement des sols,
à usage commercial**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –
SAFETY –****Part 2-67: Particular requirements for floor
treatment machines, 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 60335-2-67 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 2002 and its Amendment 1 (2005). It constitutes a technical revision.

The principal changes in this edition as compared with the third edition of IEC 60335-2-67 are as follows (minor changes are not listed):

- the title has been changed for better distinction with regard to IEC 60335-2-72;
- the scope has been revised editorially to avoid misunderstandings;
- terms and definitions 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;
- a new Annex BB (LPG requirements) was added;
- a new Annex CC 'Emission of acoustical noise' was added; and
- a new Annex DD 'Emission of vibration' was added.

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

FDIS	Report on voting
61J/489/FDIS	61J/498/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 for commercial use.

When a particular subclause 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 subclause or involve notes in Part 1, they are numbered starting from 101, including those in a replaced clause or subclause;
- 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.

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 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.

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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 2-67: Particular requirements for floor treatment machines, for commercial use

1 Scope

This clause of Part 1 is replaced by the following.

This International Standard deals with the safety of powered floor treatment machines intended for commercial indoor or outdoor use for the following applications:

- scrubbing,
- wet or dry pick-up,
- polishing and dry buffing,
- application of wax, sealing products and powder based detergents,
- shampooing,
- stripping, grinding and scarifying

of floors with an artificial surface.

Their cleaning motion is more lateral or periodic than linear.

NOTE 101 By contrast, the cleaning motion of machines covered by IEC 60335-2-72 is more linear than lateral or periodic.

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 are not equipped with a **traction drive**. 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

- vacuum cleaners and water-suction cleaning appliances for household use (IEC 60335-2-2);
- floor treatment appliances for household use according to IEC 60335-2-10;
- spray extraction machines for **commercial use** (IEC 60335-2-68);
- wet and dry vacuum cleaners, including power brush, for **commercial use** (IEC 60335-2-69);

- floor treatment machines with or without **traction drive**, for **commercial use**, according to IEC 60335-2-72;
- hand-held and transportable motor-operated electric **tools** (IEC 60745 series, IEC 61029 series);
- machines designed for use in corrosive or explosive environments (dust, vapour or gas);
- machines designed for picking up hazardous dusts (as defined in IEC 60335-2-69), inflammable substances, or glowing particles;
- machines designed for use in vehicles or on board of ships or aircraft.

NOTE 103 Attention is drawn to the fact that in many countries, additional requirements on the safe use of the equipment covered can be specified by the national health authorities, the national authorities responsible for the protection of labour, the national water supply authorities and similar authorities.

2 Normative references

This clause of Part 1 is applicable except as follows.

Addition:

IEC 60312-1, *Vacuum cleaners for household use – Part 1: Dry vacuum cleaners – Methods for measuring the performance*

ISO 6344-2, *Coated abrasives – Grain size analysis – Part 2: Determination of grain size distribution of macrogrits P12 to P220*

3 Terms and definitions

This clause of Part 1 is applicable except as follows.

3.1.9 *Replacement:*

normal operation

conditions under which the machine is operated in normal use, as intended by the manufacturer

It denotes the load corresponding to the **rated power input** or the highest obtainable load of all particular loads of the various functions that can be operated at the same time according to the manufacturer's instructions.

Tanks of machines, if applicable, are filled before starting the operation to the highest level as indicated on the tank, or completely if no marking is provided.

Socket-outlets for accessories are loaded with a resistive load in accordance with the marking. Suction functions, if applicable, are switched on during operation.

The **normal operation** related to the operational functions is specified in 3.1.9.101 to 3.1.9.103.

3.1.9.101 Scrubbing, stripping, grinding and scarifying machines are operated with the appropriate brushes or pads on a surface of hydraulically pressed concrete paving slabs (see Annex AA).

An alternative is a smooth concrete area of a surface consistency comparable with hydraulically pressed concrete paving slabs.