

Australian/New Zealand Standard™

**Household and similar electrical  
appliances—Safety**

**Part 2.72: Particular requirements for  
floor treatment machines with or without  
traction drive, for commercial use**



### **AS/NZS 60335.2.72:2013**

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-002, Safety of Household and Similar Electrical Appliances and Small Power Transformers. It was approved on behalf of the Council of Standards Australia on 21 May 2013 and on behalf of the Council of Standards New Zealand on 5 June 2013.

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*This Standard was issued in draft form for comment as DR 12932.*

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# Australian/New Zealand Standard™

## Household and similar electrical appliances—Safety

### Part 2.72: Particular requirements for floor treatment machines with or without traction drive, for commercial use

Originated as AS/NZS 60335.2.72:2003.  
Jointly revised and redesignated AS/NZS 60335.2.72:2013.

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## STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

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**AS/NZS 60335.2.72:2013****HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –  
SAFETY –****Part 2.72: Particular requirements for floor treatment machines with or without traction  
drive, for commercial use****Foreword**

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-002- Safety of Household and Similar Electrical Appliances and Small Power Transformers to supersede AS/NZS 60335.2.72:2003 three years from the date of publication. During this period it is anticipated that regulatory authorities will approve floor treatment machines with or without traction drive, for commercial use to either standard.

The principal changes in this edition as compared with the second edition of IEC 60335-2-72 and its amendments are as follows (minor changes are not listed).

The standard has been revised completely and changed significantly, in particular with regard to the following clauses:

- 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 objective of this Standard is to provide manufacturers, designers, regulatory authorities, testing laboratories and similar organizations with safety requirements designed to give the user protection against hazards that might occur during normal operation and abnormal operation of the appliance and which may be used as the basis for approval for sale or for connection to the electricity supply mains in Australia and New Zealand

The text of IEC 60335-2-72 Ed 3, prepared by IEC Technical Committee SC 61J, was submitted to the Standards Australia/Standards New Zealand Combined Procedure (dual public comment and committee vote) for adoption of the IEC standard as a Standards Australia/Standards New Zealand joint standard.

This Standard is an adoption with national modifications of the third edition of IEC 60335-2-72, *Household and similar electrical appliances – Safety – Part 2-72: Particular requirements for floor treatment machines with or without traction drive, for commercial use*. It has been varied as indicated to take account of Australian and New Zealand conditions.

This part 2 has to be used in conjunction with the latest edition of AS/NZS 60335.1 Household and similar electrical appliances – Safety – Part 1: General requirements and its Amendments. It was established on the basis of AS/NZS 60335.1:2011.

This part 2 supplements or modifies the corresponding clauses of AS/NZS 60335.1 so as to convert it into the Australian/New Zealand Standard: Safety requirements for floor treatment machines with or without traction drive, 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 of Part 1 is to be adapted accordingly.

NOTE 1 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.;
- subclauses, notes and annexes that are additional to those in the IEC standard are prefixed with the letters AZ.

NOTE 2 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.

p NOTE 3 In this document, p is used in the margin to indicate instructions for preparing a consolidated version.

The essential safety requirements in AS/NZS 3820<sup>1</sup> that could be applicable to requirements for floor treatment machines with or without traction drive, for commercial use are covered by this standard.

The national variations to IEC 60335-2-72 Ed 3 form the Australian and New Zealand national variations for purposes of the IECCE scheme for recognition of results of testing to standards for safety of electrical equipment (the CB scheme).

There are no national variations from the IEC Standard from which this standard is adopted, other than those listed in the national variations to AS/NZS 60335.1.

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<sup>1</sup> AS/NZS 3820 *Essential safety requirements for electrical equipment*

## CONTENTS

FOREWORD.....	4
INTRODUCTION.....	7
1 Scope.....	8
2 Normative references .....	9
3 Terms and definitions .....	9
4 General requirement.....	12
5 General conditions for the tests .....	12
6 Classification.....	13
7 Marking and instructions.....	13
8 Protection against access to live parts.....	17
9 Starting of motor-operated appliances .....	17
10 Power input and current .....	17
11 Heating .....	17
12 Void.....	17
13 Leakage current and electric strength at operating temperature.....	17
14 Transient overvoltages .....	17
15 Moisture resistance .....	17
16 Leakage current and electric strength.....	19
17 Overload protection of transformers and associated circuits .....	19
18 Endurance.....	19
19 Abnormal operation .....	20
20 Stability and mechanical hazards .....	20
21 Mechanical strength .....	25
22 Construction.....	27
23 Internal wiring.....	31
24 Components .....	31
25 Supply connection and external flexible cords .....	31
26 Terminals for external conductors.....	32
27 Provision for earthing .....	32
28 Screws and connections .....	32
29 Clearances, creepage distances and solid insulation .....	33
30 Resistance to heat and fire.....	33
31 Resistance to rusting.....	33
32 Radiation, toxicity and similar hazards.....	33
Annexes .....	37
Annex B (normative) Appliances powered by rechargeable batteries.....	38
Annex AA (normative) Precast paving slabs.....	44
Annex BB (normative) Requirements for internal combustion engine powered machines using liquefied petroleum gas (LPG) .....	45
Annex CC (normative) Falling-object protective structures (FOPS) – Dynamic test and performance requirements .....	48
Annex DD (informative) Emission of acoustical noise.....	51

Annex EE (informative) .....	54
Bibliography.....	55
Figure 101 – Impact test apparatus.....	34
Figure 102 – Apparatus for testing the abrasion resistance of current-carrying hoses .....	35
Figure 103 – Apparatus for testing the resistance to flexing of current-carrying hoses .....	35
Figure 104 – Configuration of the hose for the freezing treatment .....	35
Figure 105 – Flexing positions for the hose after removal from the freezing cabinet.....	36
Figure 106 – Warning symbol: Do not inhale exhaust fumes .....	36
Figure B.101 – Forms of constructions for cleaning machines covered by Annex B.....	39
Figure B.102 – Circuit for testing battery chargers (taken from IEC 60335-2-29).....	43
Figure CC.1 – Satisfactory protection by the overhead guard.....	49
Figure CC.2 – Admissible deformation when the overhead guard is supported at all sides.....	50
Figure CC.3 – Admissible deformation when the overhead guard is supported at one side .....	50
Table 12 – Pull force and torque .....	32
Table DD.1 – Determination of uncertainty.....	53

## 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 third edition cancels and replaces the second edition published in 2002 and its Amendment 1 (2005). It constitutes a technical revision.

The principal changes in this edition as compared with the second edition of IEC 60335-2-72 are as follows (minor changes are not listed):

The standard has been revised completely and changed significantly, in particular with regard to the following clauses:

- 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/491/FDIS	61J/500/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 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.

A bilingual version of this standard may be issued at a later date.

**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 document using a colour printer.**

## 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 according to IEC 60335-2-10;
- floor treatment machines for **commercial use** according to IEC 60335-2-67;
- 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);
- road sweepers;

NOTE 103 In Europe, EN 13019 covers road sweepers.