

STN	Automatické stroje na ošetrovanie podláh pre komerčné použitie Osobitné požiadavky	STN EN IEC 63327 36 1058
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Automatic floor treatment machines for commercial use - Particular requirements

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/21

Obsahuje: EN IEC 63327:2021, IEC 63327:2021

EUROPEAN STANDARD

EN IEC 63327

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2021

ICS 13.120; 97.080

English Version

**Automatic floor treatment machines for commercial use -
Particular requirements
(IEC 63327:2021)**

Machines automatiques de traitement des sols à usage
commercial - Exigences particulières
(IEC 63327:2021)

Automatische Bodenbehandlungsmaschinen für den
gewerblichen Gebrauch - Besondere Anforderungen
(IEC 63327:2021)

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Comité Européen de Normalisation Electrotechnique
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 63327:2021 (E)**European foreword**

The text of document 61J/734/CDV, future edition 1 of IEC 63327, prepared by SC 61J "Electrical motor-operated cleaning appliances for commercial use" of IEC/TC 61 "Safety of household and similar electrical appliances" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 63327:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2022-03-08
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-06-08

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Endorsement notice

The text of the International Standard IEC 63327:2021 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60068-2-78:2012	NOTE	Harmonized as EN 60068-2-78:2013 (not modified)
IEC 60204-1:2016	NOTE	Harmonized as EN 60204-1:2018 (modified)
IEC 60335 (series)	NOTE	Harmonized as EN 60335 (series)
IEC 60335-2-2	NOTE	Harmonized as EN 60335-2-2
IEC 60335-2-10:2002	NOTE	Harmonized as EN 60335-2-10:2003 (not modified)
IEC 60335-2-29:2016	NOTE	Harmonized as EN 60335-2-29:— ¹ (not modified)
IEC 60335-2-100	NOTE	Harmonized as EN 50636-2-100
IEC 60601-1	NOTE	Harmonized as EN 60601-1
IEC 61508 (series)	NOTE	Harmonized as EN 61508 (series)
IEC 62885-9:2019	NOTE	Harmonized as EN IEC 62885-9:2019 (not modified)
ISO 3691-4	NOTE	Harmonized as EN ISO 3691-4
ISO 3743-1:2010	NOTE	Harmonized as EN ISO 3743-1:2010 (not modified)
ISO 3744:2010	NOTE	Harmonized as EN ISO 3744:2010 (not modified)

¹ To be published. Stage at the time of publication: FprEN 60335-2-29:2020.

ISO 4871:1996	NOTE	Harmonized as EN ISO 4871:2009 (not modified)
ISO 9614-2:1996	NOTE	Harmonized as EN ISO 9614-2:1996 (not modified)
ISO 11203:1995	NOTE	Harmonized as EN ISO 11203:2009 (not modified)
ISO/TR 11688-1	NOTE	Harmonized as EN ISO 11688-1
ISO 13482:2014	NOTE	Harmonized as EN ISO 13482:2014 (not modified)
ISO 13732-1	NOTE	Harmonized as EN ISO 13732-1
ISO 13856-3:2013	NOTE	Harmonized as EN ISO 13856-3:2013 (not modified)

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60335-1	2020	Household and similar electrical appliances - Safety - Part 1: General requirements	EN IEC 60335-1	— ²
IEC 60335-2-69	2021	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	2021	Household and similar electrical appliances - Safety - Part 2-72: Particular requirements for floor treatment machines with or without traction drive, for commercial use	-	-
IEC 61032	-	Protection of persons and equipment by enclosures - Probes for verification	EN 61032	-
IEC 61058-1	-	Switches for appliances - Part 1: General requirements	EN IEC 61058-1	-
IEC 61770	2008	Electric appliances connected to the water mains - Avoidance of backsiphonage and failure of hose-sets	EN 61770	2009
-	-		+ AC	2011
-	-		+ A11	2018
IEC 62061	-	Safety of machinery - Functional safety of safety-related control systems	EN IEC 62061	-
ISO 13849-1	-	Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design	EN ISO 13849-1	-

² To be published. Stage at the time of publication: FprEN IEC 60335-1:2020.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 13857	2019	Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs	EN ISO 13857	2019
ISO 18646-1	2016	Robotics - Performance criteria and related test methods for service robots - Part 1: Locomotion for wheeled robots	-	-



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Edition 1.0 2021-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Automatic floor treatment machines for commercial use –
Particular requirements**

**Machines automatiques de traitement des sols à usage commercial –
Exigences particulières**

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ELECTROTECHNICAL
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**AUTOMATIC FLOOR TREATMENT MACHINES FOR COMMERCIAL USE –
PARTICULAR REQUIREMENTS**

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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IEC 63327 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. It is an International Standard.

The text of this International Standard is based on the following documents:

CDV	Report on voting
61J/734/CDV	61J/747A/RVC

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.

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.

The requirements for the construction and testing covered by this document are applied in addition to the particular requirements for floor treatment machines with or without traction drive, for commercial use given in IEC 60335-2-72:2021.

NOTE 1 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.

NOTE 2 The 100 numbering is applied in certain clauses of this standard as these are additions to certain existing clauses of IEC 60335-1, IEC 60335-2-69, and IEC 60335-2-72.

NOTE 3 The 200 numbering in certain clauses of this standard is applied to avoid overlap with the numbering of the corresponding clauses of IEC 60335-1, IEC 60335-2-69, and IEC 60335-2-72.

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.

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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.

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 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.

AUTOMATIC FLOOR TREATMENT MACHINES FOR COMMERCIAL USE – PARTICULAR REQUIREMENTS

1 Scope

This International Standard deals with the safety of powered **automatic floor treatment machines** intended for **commercial use** indoors for the following applications:

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

of floors.

The requirements given by this standard are applied in addition to the requirements for commercial floor treatment machines in IEC 60335-2-72, as far as applicable.

For **automatic floor treatment machines** solely designed for wet or dry pick-up, additional or modified requirements of IEC 60335-2-69 where stated are applicable.

Machines covered by this standard can operate in **automatic** or **manual mode**.

Modified requirements are given in Annex FF of this standard for **automatic floor treatment machines** not equipped with a **manual mode**.

The **automatic floor treatment machines** covered by this standard are designed to avoid hazardous contact with persons in the environment applied. It is recognized that **automatic floor treatment machines** for **commercial use** might require operation within close proximity to large groups of people, such as in shopping malls and schools.

Throughout this standard, the term “machine” is used to refer to an **automatic floor treatment machine**.

The following power systems are covered:

- rechargeable batteries that are recharged by **built-in battery chargers** or off-board battery chargers which may be incorporated within the circuitry of the machine, or mounted on the machine and incorporated within the enclosure of the **automatic floor treatment machine**; or powered by batteries that need to be removed to be recharged with a charger that is external to the machine,
- Other systems are under consideration.

This standard does not apply to

- vacuum cleaners and water-suction cleaning appliances and automatic battery-operated cleaners for household use (IEC 60335-2-2);
- floor treatment machines and wet scrubbing machines for household use (IEC 60335-2-10);
- battery chargers (IEC 60335-2-29);

- floor treatment machines for **commercial use** (IEC 60335-2-67);
- spray extraction machines for **commercial use** (IEC 60335-2-68);
- road sweepers;

NOTE 101 In Europe, the EN 17106 series covers road sweepers.

- machines designed for use on **slopes** with a gradient exceeding 20 %;
- machines equipped with a power take-off (PTO);
- machines designed for use in corrosive or explosive environments (dust, vapour or gas);
- machines designed for use in vehicles or on board of ships or aircraft.
- vacuum cleaners designed for pickup of combustible dust;
- appliances for medical purposes (IEC 60601-1);
- driverless industrial trucks and their systems (ISO 3691-4);
- robots and robotic devices: Safety requirements of personal care robots (ISO 13482)
- machines with parts that extend beyond the **contact zone** of the machine;

NOTE 102 Components of the machine that operate outside the **contact zone** can be evaluated differently.

- machines designed for picking up liquids with a flash point below 55 °C.

NOTE 103 The flash point temperature limit can vary in different countries. National regulations will need to be taken into account.

NOTE 104 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

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 60335-1:2020, *Household and similar electrical appliances – Safety – Part 1: General requirements*

IEC 60335-2-69:2021, *Household and similar electrical appliances – Safety – Part 2-69: Particular requirements for wet and dry vacuum cleaners, including power brush, for commercial use*

IEC 60335-2-72:2021, *Household and similar electrical appliances – Safety – Part 2-72: Particular requirements for floor treatment machines with or without traction drive, for commercial use*

IEC 61032, *Protection of persons and equipment by enclosures – Probes for verification*

IEC 61058-1, *Switches for appliances – Part 1: General requirements*

IEC 61770:2008, *Electric appliances connected to the water mains – Avoidance of backsiphonage and failure of hose-sets*

IEC 62061, *Safety of machinery – Functional safety of safety-related control systems*

ISO 13849-1, *Safety of machinery – Safety-related parts of control systems – Part 1: General principles for design*

ISO 13857:2019, *Safety of machinery – Safety distances to prevent hazard zones being reached by upper and lower limbs*

ISO 18646-1:2016, *Robotics – Performance criteria and related test methods for service robots – Part 1: Locomotion for wheeled robots*

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