SVENSK STANDARD SS-EN IEC 63327

Fastställd	Utgåva	Sida	Ansvarig kommitté
2021-12-15	1	1 (1+39)	SEK TK 61

Särskilda fordringar på automatiska maskiner för golvbehandling för kommersiellt bruk

Automatic floor treatment machines for commercial use –
Particular requirements

Som svensk standard gäller europastandarden EN IEC 63327:2021. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 63327:2021.

Nationellt förord

Europastandarden EN IEC 63327:2021

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 63327, First edition, 2021 - Automatic floor treatment machines for commercial use - Particular requirements**

utarbetad inom International Electrotechnical Commission, IEC.

ICS 13.120.00; 97.080.00

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
Postadress: Box 1284, 164 29 KISTA
Telefon: 08 - 444 14 00.
E-post: sek@elstandard.se. Internet: www.elstandard.se

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

Genom att utforma sådana standarder blir säkerhetsfordringar tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK Svensk Elstandard
Box 1284
164 29 Kista
Tel 08-444 14 00
www.elstandard.se

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 63327

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)

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN IEC 63327:2021 E

SEK Svensk Elstandard SS-EN IEC 63327, utg 1:2021

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

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

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.

Publication	Year	Title	EN/HD	Year
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.

Publication	Year	Title	EN/HD	Year
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	-	-

IEC 63327

Edition 1.0 2021-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Automatic floor treatment machines for commercial use – Particular requirements

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

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

ICS 13.120; 97.080

ISBN 978-2-8322-9763-6

CONTENTS

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.
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.

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.

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.

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*