IEC 60335-2-64

Edition 4.1 2024-02
CONSOLIDATED VERSION

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Household and similar electrical appliances – Safety – Part 2-64: Particular requirements for commercial electric kitchen machines

Appareils électrodomestiques et analogues – Sécurité – Partie 2-64: Exigences particulières pour les machines de cuisine électriques à usage commercial



IEC 60335-2-64:2021-12+AMD1:2024-02 CSV(en-fr)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-64: Particular requirements for commercial electric kitchen machines

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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This consolidated version of the official IEC Standard and its amendment has been prepared for user convenience.

IEC 60335-2-64 edition 4.1 contains the fourth edition (2021-12) [documents 61/6372/FDIS and 61/6422/RVD] and its amendment 1 (2024-02) [documents 61/6964/CDV and 61/7065A/RVC].

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.

IEC 60335-2-64 has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances. It is an International Standard.

This fourth edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) the text has been aligned with IEC 60335-1:2020;
b) some notes have been converted to normative text, modified or deleted (1, 7.12, 9.101, 10.1, 11.7, 15.3, 20.2, 20.116, 20.117, 20.117.2, 20.117.3, 20.119, 22.101, 23.3, 27.2);
c) clarifications to some test specifications have been made (9.101, 15.1.1, 15.2, 22.113);
d) exclusion of appliances used in areas open to the public (Clause 1);
e) clarification of requirements for battery-operated appliances (Clause 1, 11.7, B.3.1.1, B.11.1);
f) relocation of cleaning instructions from 7.12.1 to 7.12;
g) conciliation of the text of IEC 60335-2-64 with other standards under IEC/TC61/MT32.

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.

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.

This Part 2 is to be used in conjunction with the latest edition of IEC 60335-1 and its amendments unless that edition precludes it; in that case, the latest edition that does not preclude it is used. It was established on the basis of the sixth edition (2020) 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: Particular requirements for commercial electric kitchen machines.

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 .

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.

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.

– 6.1: Class 01 appliances are allowed if their rated voltage does not exceed 150 V (Japan).

– 13.2: Leakage current limits are different (Japan).

– 16.2: Leakage current limits are different (Japan).

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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.

Guidance documents concerning the application of the safety requirements for appliances can be accessed via TC 61 supporting documents on the IEC website –

https://www.iec.ch/tc61/supportingdocuments

This information is given for the convenience of users of this International Standard and does not constitute a replacement for the normative text in this standard.

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 publications, basic safety publications and group safety publications 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.

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.

NOTE 3 Standards dealing with non-safety aspects of household appliances are:

– IEC standards published by TC 59 concerning methods for measuring performance;
– CISPR 11, CISPR 14-1 and relevant IEC 61000-3 series standards concerning electromagnetic emissions;
– CISPR 14-2 concerning electromagnetic immunity;
– IEC standards published by TC 111 concerning environmental matters.

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-64: Particular requirements for commercial electric kitchen machines

1 Scope

This clause of Part 1 is replaced by the following.

This part of IEC 60335 deals with the safety of electrically operated commercial **kitchen machines**, their **rated voltage** being not more than 250 V for single phase appliances connected between one phase and neutral, and 480 V for other appliances including direct current (DC) supplied appliances and **battery operated appliances**.

These appliances are not intended for household and similar purposes. They are used for commercial processing of food in areas not open to the public, for example in kitchens of restaurants, canteens, hospitals and in commercial enterprises such as bakeries and butcheries.

Examples of **kitchen machines** are

– mixers;
– liquid or food blenders;
– kneaders;
– beaters;
– shredders;
– graters;
– mincers;
– slicers;
– peelers;
– tin openers;
– coffee grinders;
– machines used for washing and/or drying food;
– portioning machines;
– pastry rollers;
– noodle strip cutters;
– food processors;
– beam mixers.

This standard also applies to appliances which, in order to facilitate transport, are supplied in several parts (sub-assemblies) which, when assembled at the place of installation, form a constructional unit without the use of any additional parts.

The electrical part of appliances making use of other forms of energy is also within the scope of this standard.

As far as is practicable, this standard deals with the common hazards presented by these types of appliances.

Attention is drawn to the fact that

– for appliances intended to be used in vehicles or on board ships or aircraft, additional requirements can be necessary;
– in many countries, additional requirements are specified by the national health authorities, the national authorities responsible for the protection of labour, the national water supply authorities and similar authorities.

This standard does not apply to

– appliances designed exclusively for industrial purposes;
– appliances intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas);
– appliances for continuous mass production of food;
– independent conveying equipment, such as food distribution belts.

2 Normative references

This clause of Part 1 is applicable except as follows.

Addition:

ISO 898-1, *Mechanical properties of fasteners made of carbon steel and alloy steel – Part 1: Bolts, screws and studs with specified property classes – Coarse thread and fine pitch thread*

ISO 3506-1, *Fasteners – Mechanical properties of corrosion-resistant stainless steel fasteners – Part 1: Bolts, screws and studs with specified grades and property classes*

ISO 3506-2, *Fasteners – Mechanical properties of corrosion-resistant stainless steel fasteners – Part 2: Nuts with specified grades and property classes*

ISO 3506-3, *Mechanical properties of corrosion-resistant stainless steel fasteners – Part 3: Set screws and similar fasteners not under tensile stress*

ISO 3506-4, *Mechanical properties of corrosion-resistant stainless steel fasteners – Part 4: Tapping screws*

3 Terms and definitions

This clause of Part 1 is applicable except as follows.

3.1 Definitions relating to physical characteristics

3.1.4 *Addition:*

Note 101 to entry: The **rated power input** is the sum of the power inputs of all the individual elements in the appliance that can be on at one time; where there are several such combinations possible, that giving the highest power input is used in determining **the rated power input**.

3.1.9 *Addition:*
operation of the appliance under the following conditions:

The appliance is operated without load. The appliance is then loaded in appropriate steps, the supply voltage being maintained at its original value. For each step, steady conditions have to be established before increasing the load. This operation is repeated until just before an overload release operates, or until the steady condition with the highest temperature has been attained.

Note 101 to entry: The load may be achieved by using an electrical or mechanical brake.

Where it is not possible or is impractical to apply effectively an electrical or mechanical brake, the load is 115 % of the input measured when the appliance is operated without load at **rated voltage** and normal operating temperature, and with controls intended to be adjusted by the user set at maximum.

Note 102 to entry: Examples of such appliances are

– liquid blenders;
– slicers;
– peelers;
– coffee grinders;
– machines used for washing and/or drying food;
– portioning machines.

3.6 Definitions relating to parts of an appliance

3.6.101
guard plate
plate similar to a slice thickness plate, fitted to machines with automatic product feeding

3.6.102
product holder
support for the product to be sliced

Note 1 to entry: The **product holder** can be equipped with a **pusher** or a **feed carriage** and/or a clamping device

3.6.103
sliding feed table
device that supports the **product holder** and allows it to move forwards and backwards

3.6.104
feed carriage
device on which the product is placed and that slides on top of the **product holder** in order to move the product towards the blade

3.6.105
pusher
device used to move the product along the **product holder** against the thickness plate

3.6.106
last slice device
plate with which the last portion of the product is fed to the cutting blade

Note 1 to entry: The plate can be fitted on the **pusher**, clamping device or **feed carriage**.

3.8 Definitions relating to miscellaneous matters

3.8.101
indicated level
mark on the appliance to indicate the maximum liquid level for correct operation

3.8.102
installation wall
special fixed construction containing supply facilities for appliances installed in conjunction with it

4 General requirement

This clause of Part 1 is applicable.

5 General conditions for the tests

This clause of Part 1 is applicable except as follows.

5.10 *Addition:*

Appliances intended for installation in a bank of other appliances and appliances intended to be fixed to an ***installation wall*** *are enclosed to obtain protection against electric shock and harmful ingress of water equivalent to that obtained when installed in accordance with the instructions provided with the appliance.*

NOTE Appropriate enclosures or additional appliances can be needed for test purposes.

5.101 *Appliances are tested as* ***heating appliances*** *when during a mode of operation electrical heaters are energized. If no electrical heaters are energized, the appliances are tested as* ***motor-operated appliances****.*

5.102 *Appliances, when assembled in combination with or incorporating other appliances, are tested in accordance with the requirements of this standard. The other appliances are operated simultaneously in accordance with the requirements of the relevant standards.*

6 Classification

This clause of Part 1 is applicable except as follows.

6.1 *Replacement:*

Hand-held appliances shall be **class II** or **class III** with respect to protection against electric shock. Other appliances shall be **class I**, **class II** or **class III** with respect to protection against electric shock.

Compliance is checked by inspection and by the relevant tests.

6.2 *Addition:*

Appliances shall be at least IPX1 with respect to protection against harmful ingress of water.