IEC 60335-2-31

Edition 6.0 2024-02
COMMENTED VERSION

INTERNATIONAL STANDARD

colour inside

Household and similar electrical appliances – Safety – Part 2-31: Particular requirements for range hoods and other cooking fume extractors



IEC 60335-2-31:2024-02 CMV(en)



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-31: Particular requirements for range hoods and other cooking fume extractors

FOREWORD

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This commented version (CMV) of the official standard IEC 60335-2-31:2024 edition 6.0 allows the user to identify the changes made to the previous IEC 60335-2-31:2012+AMD1:2016+AMD2:2018 CSV edition 5.2. Furthermore, comments from IEC TC 61 experts are provided to explain the reasons of the most relevant changes, or to clarify any part of the content.

A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text. Experts' comments are identified by a blue-background number. Mouse over a number to display a pop-up note with the comment.

This publication contains the CMV and the official standard. The full list of comments is available at the end of the CMV.

IEC 60335-2-31 has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances. It is an International Standard.

This sixth edition cancels and replaces the fifth edition published in 2012, Amendment 1:2016 and Amendment 2:2018. This edition constitutes a technical revision.

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

a) alignment with IEC 60335-1:2020;
b) conversion of some notes to normative text (Clause 1, 22.8, 22.101, 22.102);
c) update of the installation requirements for the heating test to include down-draft systems (11.2);
d) addition of accessible surface temperature limits (11.3, 11.8);
e) introduction of IEC TR 62854 to determine compliance in case of doubt (22.14);
f) clarification of remote operation requirements for range hoods and other cooking fume extraction appliances (22.40, 22.49, 22.51);
g) clarification of 30.101 with respect to grease filters and odour extraction filters.

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

Draft	Report on voting
61/7090/FDIS	61/7105/RVD

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.

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 range hoods and other cooking fume extractors.

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, or
- revised.

NOTE 4 The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations can 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.

IMPORTANT – The "colour inside" logo on the cover page of this document 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.

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 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~~ can 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 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. ~~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.

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

– IEC standards published by TC 59 concerning methods of 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. **1**

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-31: Particular requirements for range hoods and other cooking fume extractors

1 Scope

This clause of Part 1 is replaced by the following.

This part of IEC 60335 deals with the safety of electric **range hoods** and other cooking fume extractors intended for installing above, beside, behind or under household cooking ranges, hobs and similar cooking appliances, their **rated voltage** being not more than 250 V including direct current (DC) supplied appliances. **2**

NOTE 101 The cooking appliance can be supplied by electricity or other fuels, such as gas.

Appliances not intended for normal household use but that nevertheless ~~may~~ can be a source of danger to the public, such as appliances intended to be used by laymen in shops, in light industry and on farms, are within the scope of this standard.

As far as is practicable, this standard deals with the common hazards presented by appliances that are encountered by all persons in and around the home. However, in general, it does not take into account

– persons (including children) whose
  - physical, sensory or mental capabilities; or
  - lack of experience and knowledge

  prevents them from using the appliance safely without supervision or instruction;
– children playing with the appliance.

~~NOTE 102~~ Attention is drawn to the fact that

– for appliances incorporating electrostatic air filters, IEC 60335-2-65 also applies;
– for appliances intended to be used in vehicles or on board ships or aircraft, additional requirements ~~could~~ 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 authorities responsible for buildings and similar authorities.

~~NOTE 103~~ This standard does not apply to

– appliances intended for commercial purposes (IEC 60335-2-99);
– 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).

2 Normative references

This clause of Part 1 applies except as follows:

Addition:

IEC 60584-1, *Thermocouples – Part 1: EMF specifications and tolerances*

IEC 61231, *International lamp coding system (ILCOS)*

IEC TR 62854:2014, *Sharp edge testing apparatus and test procedure for lighting equipment – Tests for sharpness of edge*

3 Terms and definitions

This clause of Part 1 is applicable except as follows.

3.5 Definitions relating to types of appliances

3.5.101
range hood
motor-operated appliance intended to collect contaminated air from above a hob

Note 1 to entry: The filtered air may be discharged back into the room or ducted away.

3.5.102
down-draft system
ventilation system intended for installation adjacent to household cooking ranges, hobs and similar cooking appliances that draws contaminated air down into an internal exhaust duct

Note 1 to entry: The filtered air may be discharged back into the room or ducted away.

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.

5.7 *Addition:*

*For **down-draft systems**, the tests specified in Clauses 11 and 13 are carried out at an ambient temperature of 40 °C ± 2 °C.*

5.10 ~~*Modification*~~ *Addition:*

~~*Unless otherwise stated,*~~ *Appliances are not connected to a duct.*

5.101 ***Down-draft systems*** *intended to be installed* ~~*above the*~~ *close to a cooking surface are tested as specified for **range hoods**.*