

# INTERNATIONAL STANDARD



**Household and similar electrical appliances – Safety –  
Part 2-99: Particular requirements for commercial electric hoods**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

### HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

#### Part 2-99: Particular requirements for commercial electric hoods

#### FOREWORD

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

**IEC 60335-2-99 edition 1.1 contains the first edition (2003-02) [documents 61E/422/FDIS and 61E/425/RVD] and its amendment 1 (2017-06) [documents 61/5366/FDIS and 61/5394/RVD].**

**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.**

This part of International Standard IEC 60335 has been prepared by subcommittee 61E: Safety of electrical commercial catering equipment, of IEC technical committee 61: Safety of household and similar electrical appliances.

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 fourth edition (2001) 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 it into the IEC standard: Safety requirements for commercial electric hoods.

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 the base publication and its amendment 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.

The following differences exist in the countries indicated below:

- 6.1: Class 01 **hoods** are allowed (Japan).
- 6.2: For **hoods** intended to be installed in a kitchen, an appropriate degree of protection against harmful ingress of water is required according to their height of installation (France).
- 13.2: Leakage current limits are different (Japan).
- 16.2: Leakage current limits are different (Japan).
- Clause 21: For **hoods** intended to be installed in a kitchen, different values of impact energy are applicable according to the height of the impact point (France).

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.



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

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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.

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.

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.

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.

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## HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

### Part 2-99: Particular requirements for commercial electric hoods

#### 1 Scope

This clause of Part 1 is replaced by the following. The following extraction systems are covered as well:

- back draft ventilation systems;
- downdraft ventilation systems;
- fume extraction modules.

This International Standard deals with the safety of electrically operated commercial **hoods** intended for installation above commercial cooking appliances such as ranges, griddles, griddle grills and deep fat fryers, and not intended for household and similar use, their **rated voltage** being not more than 250 V for single phase **hoods** connected between one phase and neutral, and 480 V for other **hoods**. Only single complete units and **hoods** supplied as separate parts which when assembled form a complete working **hood**, incorporating a fan, are within the scope of the standard.

NOTE 101 **Hoods** are used, for example in **kitchens** of restaurants, canteens, hospitals and in commercial enterprises such as bakeries, butcheries, etc.

The **hood** may be used above one or more appliance of the same or different types.

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

NOTE 102 Attention is drawn to the fact that:

- for **hoods** intended to be used in vehicles or on board ships or aircraft, additional requirements may be necessary;
- in many countries additional requirements including ventilation requirements are specified by the national health authorities, the national authorities responsible for the protection of labour and similar authorities;
- for **hoods** incorporating a filter system with means for ionizing the air, IEC 60335-2-65 also applies.

NOTE 103 This standard does not apply to:

- domestic range **hoods** (IEC 60335-2-31);
- purpose-built **hoods**, although this standard can be used as a guide (a purpose-built **hood** is either constructed on-site or specially constructed in the factory and is not mass produced);
- **hoods** not incorporating a fan;
- **hoods** designed exclusively for industrial purposes;
- **hoods** intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas).

NOTE 104 Requirements for **hoods** with externally mounted fans are under consideration.

#### 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, *Mechanical properties of corrosion-resistant stainless steel fasteners – Part 1: Bolts, screws and studs*

ISO 3506-2, *Mechanical properties of corrosion-resistant stainless steel fasteners – Part 2: Nuts*

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.

#### 3.1.4 Addition:

NOTE 101 The **rated power input** is the sum of the power inputs of all the individual elements in the **hood** which can be on at one time; where several such combinations are possible, that giving the highest power input is used in determining the **rated power input**.

#### 3.1.9 Replacement:

##### normal operation

operation of the appliance under the following conditions

The **hood** is operated after installation in accordance with the instructions, except that it is not connected to a duct.

#### 3.101

##### hood

**motor-operated appliance** intended to collect and remove contaminated air from ~~above cooking ranges, hobs and similar cooking catering~~ appliances.

Note 1 to entry: The contaminated air may pass through a filter systems and be discharged back into the room or removed from the room.

~~NOTE 2—The cooking appliances may be supplied by electricity or fuels such as gas.~~

### 4 General requirement

This clause of Part 1 is applicable.

### 5 General conditions for the tests

This clause of Part 1 is applicable.

### 6 Classification

This clause of Part 1 is applicable except as follows.

#### 6.1 Replacement:

**Hoods** shall be **class I** with respect to protection against electric shock.

*Compliance is checked by inspection and by the relevant tests.*