

INTERNATIONAL STANDARD

IEC
60335-2-71

Second edition
2002-03

Household and similar electrical appliances – Safety –

Part 2-71: Particular requirements for electrical heating appliances for breeding and rearing animals

*Appareils électrodomestiques et analogues –
Sécurité –*

*Partie 2-71:
Règles particulières pour les appareils de chauffage électrique
destinés à la reproduction et à l'élevage des animaux*



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International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –
SAFETY –**
**Part 2-71: Particular requirements for electrical heating appliances
for breeding and rearing animals**

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The 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 the 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 National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

This part of International Standard IEC 60335 has been prepared by subcommittee 61H: Safety of electrically-operated farm appliances, of IEC technical committee 61: Safety of household and similar electrical appliances.

This second edition cancels and replaces the first edition published in 1993 and its amendments 1 (1996) and 2 (1999). It constitutes a technical revision.

The text of this part of IEC 60335 is based on the following documents:

FDIS	Report on Voting
61H/166/FDIS	61H/171/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

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 that publication into the IEC standard: Safety requirements for electrical heating appliances for breeding and rearing animals.

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 of 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 associated noun are also in bold.

The committee has decided that the contents of this publication will remain unchanged until 2004. 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 II appliances to be used on the floor are allowed (Australia).
- 21: Additional tests are made (Australia).
- 25.7: Ordinary PVC sheathed supply cords are permitted (Australia, New Zealand).

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 which 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.

<https://standards.iteh.ai/standards/iec/3c9aca0-37eb-4e76-97f7-ee61ba26f880/iec-60335-2-71-2002>

<https://standards.iteh.ai/standards/iec/3c9aca0-37eb-4e76-97f7-ee61ba26f880/iec-60335-2-71-2002>

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-71: Particular requirements for electrical heating appliances for breeding and rearing animals

1 Scope

This clause of Part 1 is replaced by the following.

This standard deals with the safety of all kinds of electrical heating appliances used for livestock rearing and breeding, such as: **heat-radiating appliances, electrical sitting-hens, incubators, chicken breeding units and heating plates for animals**, the **rated voltage** of the appliances being not more than 250 V for single-phase appliances and 480 V for other appliances.

NOTE 101 This standard applies to **heating appliances** used for livestock rearing and breeding, that include an electrical motor.

NOTE 102 Attention is drawn to the fact that:

- for appliances intended to be used in vehicles or on board ships or aircraft, additional requirements may 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.

NOTE 103 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);
- heating units embedded in the floor;
- flexible sheet heating elements for room heating (IEC 60335-2-96);
- room heaters (IEC 60335-2-30).

2 Normative references

This clause of Part 1 is applicable except as follows.

Addition:

IEC 60068-2-11:1981, *Environmental testing – Part 2: Tests. Test Ka: Salt mist*

IEC 61184: *Bayonet lampholders*

3 Definitions

This clause of Part 1 is applicable except as follows.

3.1.9 Replacement:

normal operation

operation of the appliance as in normal use, in still air

3.101

heat-radiating appliance

electrical heating appliance that conveys the effective heat mainly by radiation

NOTE Appliances of this type that when operated under conditions of **normal operation**, have a temperature rise not exceeding 95 K, measured at the hottest point on the radiator, are considered to be **heating plates for animals** and not **heat-radiating appliances**.

3.102

heating plate for animals

appliance mainly intended to be fixed in stables or in **chicken breeding units** or intended to be laid on the floor

3.103

electrical sitting-hen

appliance placed on the floor that has feet or hiding-holes enabling chickens to hide under it, the chickens being warmed by an overhead **heating plate**

3.104

chicken breeding units

appliance for the breeding of chickens on several superposed levels

NOTE It is usually equipped with **heating plates** above the chickens.

3.105

incubator

appliance designed for egg hatching

NOTE It is usually equipped with heating elements for air warming and water evaporation, ventilators for air circulation and motors for agitating the eggs on the shelves.

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.

5.2 Addition:

*Up to two additional samples of the means of suspension of **portable heat radiating appliances** that are not operated on the floor in normal use shall be provided for the tests of 22.104.*

6 Classification

This clause of Part 1 is applicable except as follows.

6.1 Replacement:

Appliances shall be of **class I**, **class II** or **class III** with respect to protection against electric shock.

Appliances that in normal use are used on the floor, except those intended to be built into the floor and permanently connected to the fixed wiring, shall be **class III appliances** and shall have a **rated voltage** not exceeding 24 V.

Compliance is checked by inspection and by the relevant tests.

6.2 Addition:

Heating appliances that are operated at floor level in normal use or are intended to be operated less than 500 mm above the floor shall be IPX7.

Other appliances shall be at least IPX4.

7 Marking and instructions

This clause of Part 1 is applicable except as follows.

7.1 Addition:

Heat-radiating appliances shall be marked with the substance of the following:

- WARNING: Fire risk;
- heat-radiating appliance for animals;
- the appliance shall be securely fixed in position;
- the screen shall not be removed;

They shall also be marked with

- maximum rating of replaceable radiators: ... W;
- the minimum distance between the radiator and animals or inflammable material in the direction of the radiation;
- “Do not cover” or with symbol 5641 of IEC 60417;
- “Read the instructions” or with symbol 1641 of ISO 7000.

Chicken breeding units and **electrical sitting-hens** shall be marked “Do not cover” or with symbol 5641 of IEC 60417.