

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Household and similar electrical appliances – Safety –
Part 2-75: Particular requirements for commercial dispensing appliances
and vending machines**

**Appareils électrodomestiques et analogues – Sécurité –
Partie 2-75: Exigences particulières pour les distributeurs commerciaux
avec ou sans moyen de paiement**

60335-2-75:2012

<https://standards.iteh.ai/catalog/standards/iec/a22a73fa-4d8e-4925-bcaf-cddabd308562/iec-60335-2-75-2012>



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –
SAFETY –**

**Part 2-75: Particular requirements for commercial
dispensing appliances and vending 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 amendments has been prepared for user convenience.

IEC 60335-2-75 edition 3.2 contains the third edition (2012-12) [documents 61/4458/FDIS and 61/4512/RVD], its amendment 1 (2015-10) [documents 61/4956/FDIS and 61/5005/RVD] and its amendment 2 (2018-10) [documents 61/5567/CDV and 61/5651A/RVC].

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendments 1 and 2. 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 IEC technical committee 61: Safety of household and similar electrical appliances.

The principal changes in this edition as compared with the second edition of IEC 60335-2-75 are as follows (minor changes are not listed):

- some notes have been deleted or converted to normative text (5.2, 5.6, 5.104, 7.12.1, 7.12.101.1, 11.2, 11.8, 15.2.103, 15.2.104, 15.2.106, 15.2.109, 15.2.111, 19.102, 19.6, 19.13, 19.101, 22.6, 22.7, 22.112, 22.113, 22.114, 24.102, 27.2).
- added requirements for espresso coffee makers in 3.115, 22.114 and throughout standard;
- modified 11.4 to address heating appliances with electronic process controls and 11.6 to address combined appliances without electronic process controls;
- modified Clause 22 to indicate that pressure regulating devices are to be rendered inoperable;
- deleted ISO 13732-1 from Bibliography.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

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 fifth edition (2010) 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 commercial dispensing appliances and vending 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 the base publication and its amendments 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.

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 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.

The following differences exist in the countries indicated below.

- 6.1: Class 0I is allowed for appliances used indoors having a rated voltage not exceeding 150 V (Japan).
- 13.2: The leakage current limits are different (Japan).
- 16.2: The 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.

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 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.

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-75: Particular requirements for commercial dispensing appliances and vending machines

1 Scope

This clause of Part 1 is replaced by the following.

This International Standard deals with the safety of electric commercial **dispensing appliances** and **vending machines** for preparation or delivery of food, drinks and consumer products, their **rated voltage** being not more than 250 V for single-phase appliances and 480 V for other appliances.

NOTE 101 Examples of appliances that are within the scope of this standard are

- bulk tea or coffee brewing machines;
- cigarette **vending machines**;
- coffee grinders;
- commercial liquid heaters;
- coffee makers with or without integrated coffee grinder;
- coffee makers with cooling systems;
- hot and cold beverage **vending machines**;
- hot water **dispensers**;
- ice cream and whipped cream **dispensers**;
- ice **dispensers**;
- newspaper, audio or video tape or disc **vending machines**;
- packaged food and drink **vending machines**;
- refrigerated merchandisers.

Appliances can have more than one function.

NOTE 102 Other standards may be applicable for some functions such as

- refrigeration (IEC 60335-2-24);
- heating by microwaves (IEC 60335-2-25).

This standard also deals with the hygiene aspects of appliances.

As far as is practicable, this standard deals with the common hazards presented by appliances that are encountered by users and **maintenance persons**. However, in general, it does not take into account young children playing with the appliance.

NOTE 103 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 for appliances incorporating pressure vessels are specified;
- 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 104 This standard does not apply to

- appliances intended to be used exclusively for household purposes;
- appliances intended to be used 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);
- commercial electric boiling pans (IEC 60335-2-47);
- commercial electric bains-marie (IEC 60335-2-50);
- amusement machines and personal service machines (IEC 60335-2-82);
- commercial refrigerating appliances (IEC 60335-2-89);
- appliances solely used for dispensing money;
- display cabinets;
- appliances incorporating electrode-type water heaters.
- requirements for dispensed **potentially hazardous food** (these are covered by national health regulations in many countries).

2 Normative references

This clause of Part 1 is applicable except as follows.

Addition:

IEC 60335-2-34, *Household and similar electrical appliances – Safety – Part 2-34: Particular requirements for motor-compressors*

ISO 1817:2014 2015, *Rubber, vulcanized or thermoplastic – Determination of the effect of liquids*

3 Terms and definitions

This clause of Part 1 is applicable except as follows.

3.1.9 Replacement:

normal operation

operation of the appliance under the following conditions:

The appliance is operated in the **standby mode** until steady conditions are established and then under the most unfavourable dispensing procedure. The appliance is refilled when necessary in accordance with the instructions for use, or the **instructions for maintenance**, and the next operating period started as soon as possible.

Lids and covers of **appliances of the professional type** and of **appliances of the supervised type** are placed in their intended positions.

Coffee makers are operated with their container filled with the **rated capacity** of water, or connected to the water mains, if applicable. Coffee makers with a heated surface intended to keep the liquid warm are operated with or without the container, whichever is the more unfavourable.

3.6.2 Replacement:

detachable part

part that can be removed without the aid of a **tool**, a part that is removed in accordance with the instructions for use or the **instructions for maintenance**, even if a **tool** or **access key** is needed for removal, or a part that does not fulfill the test of 22.11

Note 1 to entry: If a part has to be removed for installation purposes, this part is not considered to be detachable even if the instructions state that it is to be removed.

Note 2 to entry: A part that can be opened is considered to be a part that can be removed.

3.7.3 Replacement:

thermal cut-out

device that during abnormal operation limits the temperature of the controlled part by automatically opening the circuit, or reducing the current, and is constructed so that its setting cannot be altered by the user or the **maintenance person**

3.8.5 Replacement:

maintenance operation

operation performed in the **maintenance area** or **user area**, such as preparing the appliance for new products or new operating methods, cleaning, price changing, replenishing, coin collecting and setting of controls or similar operations

Note 1 to entry: **Maintenance operation** does not include operations performed in the **service area**.

3.101

rated pressure

pressure assigned to the pressurized parts of the appliance by the manufacturer

3.102

standby mode

state of the appliance when filled as intended with ingredients or products, energized and ready for use, cash boxes and overflow containers being empty

3.103

access key

key or other means that gives access to the **maintenance area** but does not give access to the **service area**

Note 1 to entry: "Other means" includes a **tool** or operation by codes or signals produced by optical or electro-magnetic sources.

3.104

override key

key or other means that is used to render an interlock inoperative

3.105

dispensing appliance

appliance intended to deliver or make available food, drinks or other consumer products

Note 1 to entry: The appliance may also prepare the products.

Note 2 to entry: The dispensing operation may be initiated manually or by means such as coins or credit cards.

3.106

vending machine

dispensing appliance that is operated by coins, credit cards or other means of payment

3.107

instructions for maintenance

instructions explaining how to carry out cleaning, replenishing, coin collecting, setting of controls and similar operations

3.108

maintenance person

person who maintains the appliance in accordance with the **instructions for maintenance**

3.109

user area

area where access is gained without the use of an **access key** or a **tool**

Note 1 to entry: The **user area** of **appliances of the supervised type** is determined with **detachable parts** and other movable parts, such as doors and lids, in position as in normal use.

Note 2 to entry: **Appliances of the professional type** have no **user area**.

**3.110
maintenance area**

area where access can only be gained by the use of an **access key**

**3.111
service area**

area where access cannot be gained by the use of an **access key** alone

**3.112
appliance of the professional type**

dispensing appliance that is only intended to be used by trained personnel such as kitchen or bar staff

**3.113
appliance of the supervised type**

dispensing appliance that is intended to be maintained by trained personnel but may be used by other persons in a location where its use is overseen

Note 1 to entry: Dining rooms in restaurants are examples of such locations.

**3.114
potentially hazardous food**

food which includes natural or synthetic ingredients that are capable of supporting rapid and progressive growth of pathogenic or toxin producing micro-organisms

Note 1 to entry: Examples of **potentially hazardous food** are milk, eggs, meat, poultry, shellfish, crustaceans, and their products, either raw or heat treated, as well as food of plant origin that is ready for consumption without the need for any further preparation or processing.

Note 2 to entry: Food may become **potentially hazardous food** during processing, for example when powdered ingredients are mixed with water or when food is stored at incorrect temperature.

Note 3 to entry: **Potentially hazardous food** does not include:

- candy, nuts, gum and similar confectionery;
- cookies, crackers and similar bakery products;
- instant-coffee, chocolate, cocoa and sugar;
- food having a pH level of not greater than 4,6 or a water activity (A_w) value not greater than 0,85 at 25 °C;
- food maintained at a temperature not exceeding 5 °C for periods specified by the producer, but for not more than 5 days;
- food maintained at a temperatures above 65 °C or below –18 °C;
- food in hermetically sealed containers;
- food that has been processed to prevent spoilage.

**3.115
espresso coffee maker**

coffee maker in which water is heated and forced through the ground coffee by steam pressure or by means of a pump.

Note 1 to entry: **Espresso coffee makers** can have an outlet for supplying steam or hot water.

4 General requirement

This clause of Part 1 is applicable.