

SLOVENSKI STANDARD

SIST EN 60335-2-75:2002

01-november-2002

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Safety of household and similar electrical appliances -- Part 2-75: Particular requirements for commercial dispensing appliances and vending machines (electric or gas-heated)

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke -- Teil 2-75: Besondere Anforderungen für Ausgabegeräte und Warenautomaten für den gewerblichen Gebrauch

Sécurité des appareils électrodomestiques et analogues -- Partie 2-75: Règles particulières pour les distributeurs commerciaux avec ou sans moyen de paiement (électriques ou alimentés aux combustibles gazeux)

Ta slovenski standard je istoveten z: EN 60335-2-75:2002

ICS:

55.230

Razdelilni in prodajni
avtomati

Distribution and vending
machines

SIST EN 60335-2-75:2002

en

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EUROPEAN STANDARD

EN 60335-2-75

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2002

ICS 55.230

English version

Safety of household and similar electrical appliances
Part 2-75: Particular requirements for commercial
dispensing appliances and vending machines
(electric or gas-heated)
(IEC 60335-2-75:1995, modified)

Sécurité des appareils
électrodomestiques et analogues
Partie 2-75: Règles particulières pour les
distributeurs commerciaux avec ou sans
moyen de paiement (électriques ou
alimentés aux combustibles gazeux)
(CEI 60335-2-75:1995, modifiée)

Sicherheit elektrischer Geräte für den
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Teil 2-75: Besondere Anforderungen
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für den gewerblichen Gebrauch
(IEC 60335-2-75:1995, modifiziert)

<https://standards.iteh.ai/catalog/standards/sist/da48ec50-45ec-4a58-b898-e2392dc79a67/sist-en-60335-2-75-2002>

This European Standard was approved by CENELEC on 2002-03-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 61/896/DIS, first edition of IEC 60335-2-75, prepared by the IEC Technical Committee 61, was submitted to the IEC-CENELEC parallel voting procedure. This procedure started in May 1995 but the draft did not receive sufficient support from the CENELEC members. The comments were discussed during the Copenhagen meeting in May 1996 when it was decided to submit a draft for EN 60335-2-75 to the Unique Acceptance Procedure.

This draft was circulated in April 1997 but did not receive sufficient support. The comments were discussed during the Kristiansand meeting in June 2000 and the Brussels meeting in October 2000 when it was decided to submit a further draft for EN 60335-2-75 to the Unique Acceptance Procedure.

This draft was circulated in June 2001 and was ratified by CENELEC as EN 60335-2-75 on 2002-03-01.

The following dates are applicable:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2003-03-01
- date on which national standards
conflicting with the EN have to be withdrawn (dow) 2005-03-01

This standard has to be used in conjunction with EN 60335-1, Safety of household and similar electrical appliances, Part 1: General requirements. It was established on the basis of the 1994 edition of that standard. Amendments and revisions of Part 1 have also to be taken into account and the dates when such changes become applicable will be stated in the relevant amendment or revision of Part 1.

This Part 2 supplements or modifies the corresponding clauses of EN 60335-1, so as to convert it into the European Standard: Safety requirements for commercial dispensing appliances and vending machines.

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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.

Subclauses and figures which are additional to those in Part 1 are numbered starting with 101. Annexes which are additional to those in Part 1 are lettered AA, BB, etc. The reference of subclauses, notes, figures and annexes which are additional to those in IEC 60335-2-75 is prefixed with the letter Z.

There are no special national conditions causing a deviation from this European Standard, other than those listed in annex ZA to EN 60335-1.

NOTE Special national conditions for gas characteristics are listed in EN 437.

There are no national deviations from this European Standard, other than those listed in annex ZB to EN 60335-1.

NOTE 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 2. When a definition concerns an adjective, the adjective and the associated noun are also in bold.

p NOTE In this document p is used in the margin to indicate instructions for preparing the printed version.

Introduction

An investigation by CENELEC TC 61 has shown that all risks from products within the scope of this standard are fully covered by the Low Voltage Directive, 73/23/EEC. For products having mechanical moving parts, a risk assessment in accordance with the Machinery Directive, 89/392/EEC, has shown that the risks are mainly of electrical origin and consequently this directive is not applicable. However, the relevant essential safety requirements of the Machinery Directive are covered by this standard together with the principal objectives of the Low Voltage Directive.

Endorsement notice

The text of the international Standard IEC 60335-2-75:1995 was approved by CENELEC as a European Standard with accepted common modifications as given below.

COMMON MODIFICATIONS

1 Scope

- p Add to the first paragraph:

It also applies to commercial electric espresso-coffee machines that can also be heated by gas (see annex ZAA).

- p Add to note 1:

- coffee grinders.

- p Add after note 2:

This standard also deals with the hygiene aspects of appliances.

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2 Definitions

- p 2.9.9 Replace the text of the replacement by:

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

- p Add:

2.Z101 **cleanable surface:** Surface such that **soils** can be removed in accordance with the **instructions for maintenance**.

2.Z102 **disinfecting:** Inactivating all pathogens and a wide range of other micro-organisms to a level consistent with hygienic application of the appliance.

2.Z103 **food:** Any product or ingredient intended to be orally consumed.

2.Z104 **hygiene risk assessment:** Process for identifying hygiene hazards and the preventative measures for control of these hazards.

2.Z105 **potentially hazardous food:** Any **food** which consists in whole or in part of natural or synthetic ingredients which are in a form for which laboratory evidence demonstrates a capability for supporting rapid and progressive growth of pathogenic or toxin producing micro-organisms.

NOTE 1 Examples of **potentially hazardous food** are milk, eggs, meat, poultry, shellfish, crustacea, and their products, either raw or heat treated. **Food** of plant origin which is ready for consumption without the need for any further preparation or processing is also an example.

NOTE 2 **Food** may become **potentially hazardous food** during processing, for example when powdered ingredients are mixed with water or when **food** is stored at incorrect temperatures.

NOTE 3 **Potentially hazardous food** does not include:

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

2.Z106 **soil**: Any unwanted matter, including product residues, micro-organisms, residual detergent or disinfectant solutions.

2.Z107 **vermin**: Mammals, birds, reptiles and insects which may adversely influence the **food**.

7 Marking and instructions

p 7.12.1 Replace the text of the replacement:

If it is necessary to take special precautions during installation or **maintenance operations**, details of these shall be supplied, including the use of personal protective equipment, if necessary.

The **instructions for maintenance** supplied with the appliance or later, shall state how to gain access to the **maintenance area**. They shall not include instructions on how to gain access to a **service area**.

The **instructions for maintenance** shall

- specify the types of **food** for which the appliance is suitable,

NOTE Z1 Different **foods** may require different instructions.

- give details on how to ensure hygienic operation for the range of **foods** specified,
- include instructions for descaling, cleaning and details for the flushing and removal of any residual cleaners, sterilizers or descalers from the appliance, if applicable,
- specify the method and frequency of cleaning, **disinfecting** and rinsing together with the recommended cleaning or disinfecting agents.

NOTE Z2 The agents may be identified by their chemical denomination.

The **instructions for maintenance** for appliances intended for storage and dispensing **potentially hazardous food**, when the safety of the **food** depends upon the temperature of the appliance, shall include details for safe loading of the **food**.

NOTE Z3 This instruction is not required for appliances

- which do not dispense **food**,
- which dispense **food** in sealed containers such as cans and bottles.

The **instructions for maintenance** for appliances incorporating an appliance inlet and intended to be partially or completely immersed in water for cleaning, shall state that the connector must be removed before the appliance is cleaned and that the appliance inlet must be dried before the appliance is used again.

The **instructions for maintenance** shall state how to use the **access key** or the **override key**. If the use of an **override key** allows access to moving parts, a suitable warning shall be given.

If it is necessary to take special precautions during handling and storage prior to installation of the appliance, details shall be given.

The instructions for installation intended to be connected to the water mains, shall specify the means of connection and draw attention to any national rules which may be applicable.

p 7.12.103 Add:

These temperatures shall also be stated in the instructions for installation.

p Add:

7.12.Z101 The instructions shall state that access to the **service area** should only be permitted to persons having knowledge and practical experience of the appliance, in particular as far as safety and hygiene are concerned.

NOTE Guidelines on the reduction of acoustical noise are given in EN ISO 11688-1.

7.12.Z102 The **instructions for maintenance** shall include a statement about the acoustical noise emitted by the appliance, depending on the level as specified below. When relevant, the statement shall use the dual-number form of declaration defined in EN ISO 4871, including the value of uncertainty.

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7.12.Z102.1 If the A-weighted sound pressure level determined in accordance with annex ZBB is below 70 dB, no value need be given, but the instructions shall state that the A-weighted sound pressure level is below 70 dB.

7.12.Z102.2 If the A-weighted sound pressure level determined in accordance with annex ZBB is above 70 dB, the instructions shall state the value in the following form:

A-weighted sound pressure level	xx dB, uncertainty y dB
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7.12.Z102.3 If the A-weighted sound pressure level determined in accordance with annex ZBB is above 85 dB, the instructions shall state the values of the sound pressure level and the sound power level in the following form:

A-weighted sound pressure level	xx dB, uncertainty y dB
A-weighted sound power level	XX dB, uncertainty Y dB

22 Construction

p 22.104 Delete the note.

p Add:

22.Z101 Appliances for dispensing **potentially hazardous food** shall incorporate a device which automatically prevents dispensing the food if a storage or process temperature reaches a value having an adverse influence on the **food**.

NOTE An adverse influence is an effect which gives a significant reduction of fitness for consumption of **food**. A **food** can be adversely influenced in particular by microbial pathogens or other unwanted micro-organisms, toxins, vermin, domestic animals and other contaminants.

Compliance is checked by inspection.

22.Z102 Surfaces of food areas shall be **cleanable surfaces** and if necessary they shall be capable of being disinfected.

NOTE The food area comprises surfaces in contact with the **food** and surfaces that the **food** may contact during preparation of the product.

*Compliance is checked by inspection after having operated, cleaned and disinfected the appliance in accordance with the **instructions for maintenance**.*

22.Z103 Surfaces of splash areas shall be **cleanable surfaces**.

NOTE The splash area comprises surfaces on which part of the **food** may splash or flow during normal use without it becoming part of the product.

*Compliance is checked by inspection after having operated and cleaned the appliance in accordance with the **instructions for maintenance**.*

22.Z104 Non-food areas that are not adequately separated from food areas shall be constructed so that the retention of moisture, the ingress and harbourage of **vermin** and **soils** is prevented. When this is unavoidable, the surfaces of non-food areas shall be **cleanable surfaces**.

NOTE 1 Non-food areas are areas other than food areas and splash areas.

NOTE 2 This requirement does not apply to appliances

- which do not dispense **food**,
- which dispense **food** in sealed containers such as cans and bottles.

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Compliance is checked by inspection.

22.Z105 Appliances shall be constructed so that hygiene hazards that are identified by a hygiene risk assessment are prevented.

Compliance is checked by inspection.

NOTE Hygiene requirements in addition to those covered by 22.Z101 to 22.Z104 are under consideration.

22.Z106 Appliances intended to be connected to the water mains shall be constructed so that backsiphonage is prevented.

Compliance is checked by inspection and by the relevant tests of EN 61770.

Annexes**Annex A - Normative references**

p Replace by:

Annex A
(normative)**Normative references****International publications with their relevant European publication***Addition:*

<u>IEC standard</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
61058-1	1990	Switches for appliances – Part 1: General requirements	EN 61058-1	1992
61770	1998	Electric appliances connected to the water mains – Avoidance of backsiphonage and failure of hose-sets	EN 61770	1999
<u>ISO standard</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
228-1	2000	Pipe threads where pressure-tight joints are not made on the threads Part 1: Dimensions, tolerances and designation	-	-
1817	1999	Rubber, vulcanized - Determination of the effect of liquids https://standards.iteh.ai/catalog/standards/sist/da48ec50-45ec-4a58-b898-11392023967/sist-en-60335-2-75-2002	-	-
3743-1	1994	Acoustics – Determination of sound power levels of noise sources – Engineering methods for small, movable sources in reverberant fields – Part 1: Comparison method for hard-walled test rooms	EN ISO 3743-1	1995
3744	1994	Acoustics – Determination of sound power levels of noise sources using sound pressure – Engineering method in an essentially free field over a reflecting plane	EN ISO 3744	1995
4871	1996	Acoustics – Declaration and verification of noise emission values of machinery and equipment	EN ISO 4871	1996
11201	1995	Acoustics – Noise emitted by machinery and equipment – Measurement of emission sound pressure levels at a work station and at other specified positions – Engineering method in an essentially free field over a reflecting plane	EN ISO 11201	1995
11688-1	1995	Acoustics – Recommended practice for the design of low-noise machinery and equipment – Part 1: Planning	EN ISO 11688-1	1998

<u>CEN standard</u>	<u>Year</u>	<u>Title</u>
EN 437	1993	Test gases - Test pressures - Appliance categories
CR 1749	1995	European scheme for the classification of gas appliances according to the method of evacuation of the products of combustion (types)
CR 1472	1994	General guidance for the marking of gas appliances

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Annex ZAA (normative)

Commercial electric espresso-coffee machines that can also be heated by gas

ZAA.1 Scope

This annex applies to the gas-heated part of commercial electric espresso-coffee machines having a nominal heat input not exceeding 3,5 kW, which incorporate an **atmospheric injection burner** and a steam or superheated water generator having a maximum rated pressure of 0,3 MPa (3 bar) and a maximum capacity of 35 litres.

ZAA.2 Definitions

ZAA.2.101 atmospheric injection burner: Burner in which part of the air necessary for the combustion, called primary air, is entrained by the gas flow and is mixed upstream of the burner, the remainder of the air, called secondary air, is entrained downstream of the burner.

ZAA.2.102 gas rate adjuster: Device allowing the gas rate of a burner to be set at a pre-determined value in accordance with the supply conditions.

NOTE 1 The adjustment may be continuous (adjustment screw) or discontinuous (change of calibrated orifices, etc.).

NOTE 2 The operation of changing the setting of this device is termed "adjustment of the gas rate".

ZAA.2.103 modulating governor: Device which maintains a sensibly constant downstream pressure when the upstream pressure and the gas rate vary within a range of given values.

ZAA.2.104 primary air adjuster: Device allowing the primary aeration of a burner to be set at a pre-determined value in accordance with the supply conditions.

NOTE The operation of changing the setting of this device is termed "adjustment of the primary air".

ZAA.4 General conditions for the tests

ZAA.4.4 Addition:

When testing the gas-heated part of the appliance, the influence of the electric part has to be taken into account.

ZAA.6 Classification

ZAA.6.101 Appliances are classified in accordance with EN 437 with respect to test gases, test pressures and appliance categories.

ZAA.6.102 Appliances shall be of type A in accordance with CEN report 1749 with respect to the method of evacuation of the products of combustion.

ZAA.7 Marking and instructions**ZAA.7.1 Addition :**

- type of gas and pressure or pressure couple for which the appliance is adjusted;
- category. When more than one category is specified, each of these categories shall be indicated with respect to the appropriate countries of destination;
- nominal heat input.

NOTE For these markings, the CEN report CR 1472 may be used.

The appliance shall be marked with the substance of the following warning :

WARNING: This appliance is to be installed in accordance with the national regulations and only in a correctly ventilated location.

ZAA.7.1.101 Gas taps shall be marked with

- a disc for “off”,
- a star for “ignition”,
- a large stylized flame for “burner full on”,
- a small stylized flame for “reduced rate”.

NOTE The marking is not required provided that incorrect manipulation is not possible.

Compliance is checked by inspection.

ZAA.7.1.102 Injectors shall be marked with appropriate means of identification.

Compliance is checked by inspection.

ZAA.7.12 Addition : <https://standards.iteh.ai/catalog/standards/sist/da48ec50-45ec-4a58-b898-e2392dc79a67/sist-en-60335-2-75-2002>

The instructions for use shall state the type of gas and the pressure or pressure couple for which the appliance is adjusted.

ZAA.7.12.1 Addition:

The instructions for installation shall contain the substance of the following warnings:

WARNING : Before installation, take care that the conditions of the local gas distribution (type and pressure of gas) are compatible with the adjustment of the appliance.

WARNING : This appliance must be installed and connected in accordance with the national regulations. Special attention is to be paid to the regulations with regard to ventilation.

The instructions for installation shall include information with regard to

- connection of the appliance to the gas supply,
- national regulations regarding installation and ventilation of the country where the appliance is to be installed,
- fixing of the appliance, if applicable,
- minimum distances between the appliance and the adjacent walls, if applicable,
- required values of the pressure in accordance with the Wobbe number of the gas used,
- adjusting devices, in particular the type and the characteristics of the gas pressure regulator, if any.

ZAA.7.12.101 The instructions shall include all the necessary information with regard to the conversion from a gas of one group or family to a gas of another group or another family. They shall also include details for adjusting the appliance to the different distribution pressures.

Compliance is checked by inspection.

ZAA.19 Abnormal operation**ZAA.19.1 Addition:**

Burners of gas espresso-coffee machines are subjected to the test of ZAA.19.101.

ZAA.19.101 *The appliance is adjusted for one of the reference gases corresponding to the category specified. The test is carried out using the reference gas and the corresponding injector.*

For appliances having several identical burners, the test is only carried out on one burner of each type.

The gas is ignited at the injector provided that this is possible without dismantling a major part of the appliance, and also at the burner head if the combustion can be maintained under these conditions. The test is carried out for 15 min at nominal heat input.

If the combustion cannot be maintained at the injector, the pressure is reduced until the combustion can be maintained. It is not reduced below the minimum pressure specified. If the combustion still cannot be maintained, the test is carried out with the gas rate adjuster set at the reduced rate position.

The burner shall show no deterioration other than that associated with gas combustion.

ZAA.22 Construction

ZAA.22.101 The operations necessary for the conversion from a gas of one group or family to a gas of another group or another family, and for adapting to the different distribution pressures of a gas, shall be in accordance with the requirements given below for each category. It shall be possible to carry out these operations without having to disconnect the appliance from the gas supply.

The parts necessary for the conversion shall be available from the manufacturer.

ZAA.22.101.1 Category I [SIST EN 60335-2-75:2002](https://standards.iteh.ai/catalog/standards/sist/da48ec50-45ec-4a58-b898-e2392dc79a67/sist-en-60335-2-75-2002)
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ZAA.22.101.1.1 Categories I_{2H}, I_{2L}, I_{2E}, I_{2E+}.

No adjustment of the appliance.

ZAA.22.101.1.2 Category I_{3B/P} :

No adjustment of the appliance.

ZAA.22.101.1.3 Category I₃₊ :

- replacement of injectors or restrictors but only to convert from one pressure couple to another, for example from 28 mbar/37 mbar to 50 mbar/67 mbar;
- adjustment of the primary air to convert from one pressure couple to another.

ZAA.22.101.1.4 Category I_{3P} :

- for changing the gas: no adjustment of the appliance;
- for changing the pressure: replacement of injectors, adjustment of the gas rate and adjustment of the primary air.