

SLOVENSKI STANDARD

SIST EN 60335-2-75:2004

01-oktober-2004

Nadomešča:

SIST EN 60335-2-63:1995

SIST EN 60335-2-75:2002

Gospodinjski in podobni električni aparati - Varnost - 2-75. del: Posebne zahteve za komercialne dozirne in prodajne avtomate (IEC 60335-2-75:2002)

Household and similar electrical appliances - Safety -- Part 2-75: Particular requirements for commercial dispensing appliances and vending machines (IEC 60335-2-75:2002)

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke -- Teil 2-75: Besondere Anforderungen für Ausgabegeräte und Warenautomaten für den gewerblichen Gebrauch (IEC 60335-2-75:2002)

Appareils électrodomestiques et analogues - Sécurité -- Partie 2-75: Règles particulières pour les distributeurs commerciaux avec ou sans moyen de paiement (IEC 60335-2-75:2002)

Ta slovenski standard je istoveten z: EN 60335-2-75:2004

ICS:

55.230

Razdelilni in prodajni
avtomati

Distribution and vending
machines

SIST EN 60335-2-75:2004

en

EUROPEAN STANDARD

EN 60335-2-75

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2004

ICS 55.230

Supersedes EN 60335-2-63:1993 and EN 60335-2-75:2002

English version

**Household and similar electrical appliances –
Safety
Part 2-75: Particular requirements for commercial
dispensing appliances and vending machines
(IEC 60335-2-75:2002, modified)**

Appareils électrodomestiques et
analogues –
Sécurité
Partie 2-75: Règles particulières
pour les distributeurs commerciaux
avec ou sans moyen de paiement
(CEI 60335-2-75:2002, modifiée)

Sicherheit elektrischer Geräte für den
Hausgebrauch und ähnliche Zwecke
Teil 2-75: Besondere Anforderungen
für Ausgabegeräte und Warenautomaten
für den gewerblichen Gebrauch
(IEC 60335-2-75:2002, modifiziert)

SIST EN 60335-2-75:2004

<https://standards.iteh.ai/catalog/standards/sist/cd0f49ae-c3b8-4f22-8a82-b73ede1df672/sist-en-60335-2-75-2004>

This European Standard was approved by CENELEC on 2004-03-01. 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, 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 the International Standard IEC 60335-2-75:2002, prepared by the IEC Technical Committee 61, together with the common modifications prepared by CENELEC TC 61, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 60335-2-75 on 2004-03-01.

This European Standard replaces EN 60335-2-63:1993 and EN 60335-2-75:2002.

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) 2005-03-01
- date on which the national standards conflicting with the EN have to be withdrawn (dow) 2007-03-01

This part 2 has to be used in conjunction with EN 60335-1, Household and similar electrical appliances – Safety – Part 1: General requirements. It was established on the basis of the 2002 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 electric 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 of Part 1 is to be adapted accordingly.

NOTE 1 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.;
- subclauses, notes and annexes that are additional to those in the IEC standard are prefixed with the letter Z.

NOTE 2 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.

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

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

- 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, 98/37/EC, 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 60335-2-75:2002 was approved by CENELEC as a European Standard with agreed 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 after Note 102:

This standard also deals with the hygiene aspects of appliances.

3 Definitions

p Add:

3.Z101

cleanable surface

surface such that soils can be removed in accordance with the **instructions for maintenance**

3.Z102

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.

7 Marking and instructions

p Add:

7.12.101.Z1 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 This instruction is not required for appliances

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

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.

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.

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

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

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 Add:

22.Z101 Appliances for dispensing **potentially hazardous food** shall incorporate a device which automatically prevents dispensing the food if a storage on 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.

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.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 60335-2-75:2004

<https://standards.iteh.ai/catalog/standards/sist/cd0f49ae-c3b8-4f22-8a82-b73ede1df672/sist-en-60335-2-75-2004>

p Add:

Annex ZC (normative)

Normative references to international publications with their corresponding European publications

Addition:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
--	--	Test gases - Test pressures - Appliance categories	EN 437	1993 ²⁾
--	--	General guidance for the marking of gas appliances	CR 1472	1994 ²⁾
--	--	European scheme for the classification of gas appliances according to the method of evacuation of the products of combustion (types)	CR 1749	1995 ²⁾
IEC 60335-2-34	– ¹⁾	Household and similar electrical appliances – Safety – Part 2-34: Particular requirements for motor-compressors	EN 60335-2-34	2002 ²⁾
ISO 228-1	– ¹⁾	Pipe threads where pressure-tight are not made on the threads Part 1: Dimensions, tolerances and designation	EN ISO 228-1	2003 ²⁾
ISO 1817	– ¹⁾	Rubber, vulcanized - Determination of the effect of liquids	-	-
ISO 3743-1	– ¹⁾	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 ²⁾
ISO 3744	– ¹⁾	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 ²⁾
ISO 4871	– ¹⁾	Acoustics – Declaration and verification of noise emission values of machinery and equipment	EN ISO 4871	1996 ²⁾
ISO 11201	– ¹⁾	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 ²⁾

¹⁾ undated reference

²⁾ valid edition at date of issue

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 11688-1	– ¹⁾	Acoustics – Recommended practice for the design of low-noise machinery and equipment – Part 1: Planning	EN ISO 11688-1	1998 ²⁾

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN 60335-2-75:2004

<https://standards.iteh.ai/catalog/standards/sist/cd0f49ae-c3b8-4f22-8a82-b73ede1df672/sist-en-60335-2-75-2004>

Annex ZAA (normative)

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

NOTE Additional clauses and subclauses in this annex are numbered starting with 201.

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.

3 Definitions

3.Z201

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

3.Z202

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".

3.Z203

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

3.Z204

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".

5 General conditions for the tests

5.4 Addition:

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

6 Classification

6.Z201 Appliances are classified in accordance with EN 437 with respect to test gases, test pressures and appliance categories.

6.Z202 Appliances shall be of type A in accordance with CEN Report CR 1749 with respect to the method of evacuation of the products of combustion.

7 Marking and instructions

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.

7.12 Addition :

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

7.12.1 Addition:

The installation instructions 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 installation instructions 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.

The installation 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.

7.Z201 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.

7.Z202 Injectors shall be marked with appropriate means of identification.

Compliance is checked by inspection.

19 Abnormal operation

19.1 Addition:

Burners of gas espresso-coffee machines are subjected to the test of 19.Z201.

19.Z201 *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.

22 Construction

22.Z201 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 in 22.Z201.1 to 22.Z201.3 for the different categories. 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.

22.Z201.1 Category I

22.Z201.1.1 Categories I_{2H}, I_{2L}, I_{2E}, I_{2E+} : [standards/sist/cd0f49ae-c3b8-4f22-8a82-b73ede1df672/sist-en-60335-2-75-2004](https://standards.sist.org/standards/sist/cd0f49ae-c3b8-4f22-8a82-b73ede1df672/sist-en-60335-2-75-2004)

No adjustment of the appliance.

22.Z201.1.2 Category I_{3B/P} :

No adjustment of the appliance.

22.Z201.1.3 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.

22.Z201.1.4 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.

22.Z201.2 Category II

22.Z201.2.1 Categories of appliances designed for use with gases of the first and second families:

- replacement of injectors or restrictors;
- adjustment of the gas rate, for gases of the first family;
- adjustment of the primary air;
- rendering the **modulating governor** inoperative;
- rendering the **gas rate adjuster** inoperative for gases of the second family.

These operations are only acceptable when converting from a gas of the first family to a gas of the second family and vice versa.

22.Z201.2.2 Categories of appliances designed for use with gases of the second and third families:

- replacement of injectors or restrictors;
- adjustment of primary air;
- rendering the **modulating governor** inoperative;
- rendering the **gas rate adjuster** inoperative for gases of the second family.

These operations are only acceptable

- when converting from a gas of one family to a gas of another family,
- when converting from a butane/propane pressure couple to another, for example, 28 mbar/37 mbar to 50 mbar/67 mbar.

<https://standards.iteh.ai/catalog/standards/sist/cd0f49ae-c3b8-4f22-8a82-b73ede1df672/sist->

When converting from one gas to another within a pressure couple of the third family, only the primary air is allowed to be adjusted.

22.Z201.3 Category III:

- replacement of injectors or restrictors;
- adjustment of the gas rate, for gases of the first family;
- adjustment of the primary air;
- adjustment of the **modulating governor**;
- rendering the **gas rate adjusters** inoperative, for gases of the third family;
- rendering the **modulating governor** inoperative.

These operations are only acceptable

- when converting from a gas of one family to a gas of another family,
- when converting from a butane/propane pressure couple to another couple.

When converting from one gas to another within a pressure couple of the third family, only the primary air is allowed to be adjusted.

22.Z202 The means of connection of the appliance to the gas supply shall be easily accessible. They shall be located so that sufficient space is provided for the tightening **tool**.

Except for appliances of category I₃, the inlet connections shall have a thread which complies with ISO 228-1 or shall have a compression fitting. In the first case, the end of the inlet connection shall be sufficiently flat in order to accommodate a seal.

The pipe incorporating the inlet connection shall be rigidly fixed to the appliance.

Compliance is checked by inspection.

22.Z203 Holes for screws and other fastening means for assembling the appliance shall not end in cavities containing gas.

The tightness of the gas circuit shall be ensured by means of metal to metal joints or joints with seals, for example washes, O-rings or gaskets. Products which seal the thread are only allowed to be used for parts which are not disassembled during **user maintenance**, for example gas taps and injectors. Solder having a melting point lower than 450° C, glues and resins shall not be used to ensure the tightness of the gas circuit.

Compliance is checked by inspection.

22.Z204 Appliances shall be constructed so that under normal working conditions, sufficient air is provided for combustion. The passage for combustion products shall be constructed so that it cannot be obstructed.

The cross-sectional area of the passage for air towards the combustion chamber, and the cross-sectional area of the passage for combustion products, shall not be adjustable.

Compliance is checked by inspection.

22.Z205 It shall be possible to visually check the ignition and operation of the burner.

NOTE It may be necessary to open a shutter to see the burner.

Compliance is checked by inspection

22.Z206 Gas taps shall be mounted so that they are protected against dirt and that their strength, operation, handling and accessibility are not affected by actuation during normal use. They shall be installed in a position for easy access for their replacement and maintenance.

Gas tap levers shall be constructed so that they cannot be incorrectly fitted and shall be protected against accidental movement. When they act by rotation, the opening direction shall be anti-clockwise.

Compliance is checked by inspection.

22.Z207 Cross-sections of flame ports shall not be adjustable.

If a burner is removable, its position shall be well defined. It shall be easy to position it correctly and impossible to position it incorrectly.

Primary air adjusters shall not be incorporated in appliances of categories I_{2H}, I_{2L}, I_{2E}, I_{2E+} and I_{3P}.

NOTE **Primary air adjusters** may be incorporated in other appliances.

It shall only be possible to adjust **primary air adjusters** by means of a **tool**. It shall be possible to lock the adjuster in a position which is appropriate for the gas used.

Air inlets of **primary air adjusters** shall be protected so that accidental blockage is prevented.

Compliance is checked by inspection.

22.Z208 Appliances of categories I_{2H}, I_{2L}, I_{2E}, I_{2E+}, I_{3B/P}, I₃₊, I_{3P}, II_{2H3B/P}, II_{2H3+}, II_{2H3P}, II_{2E3B/P}, II_{2E3+}, II_{2E3P}, II_{2E+3B/P}, II_{2E+3+} and II_{2E+3P} shall not be fitted with **gas rate adjusters** having continuous adjustment. However, it is allowed to set the **gas rate adjuster** at reduced rates for appliances of categories II_{2H3B/P}, II_{2H3+}, II_{2H3P}, II_{2E3B/P}, II_{2E3+}, II_{2E3P}, II_{2E+3B/P}, II_{2E+3+} and II_{2E+3P} when using second family gases. This also applies to appliances of category I_{2E+} which are also of category II_{2E+3+}.

For appliances of categories II_{1a2E} and II_{1a2H}, **gas rate adjusters** may be fitted. However, if these appliances are supplied with a second family gas, any continuous adjustment of the nominal flow rate shall be prevented, adjustment of the reduced flow rate being allowed.

For appliances of category III, it shall be possible to lock the **gas rate adjuster** in the fully open position when the appliance is supplied with third family gases.

Gas rate adjusters shall be constructed to prevent accidental adjustment by the user. It shall be possible to lock them after adjustment.

Compliance is checked by inspection.

24 Components

24.Z201 Flame supervision devices shall be constructed so that, in the event of failure of one of its essential operating components, the gas supply to the burner is shut off automatically.

NOTE A flame supervision device is a device which shuts off the supply of gas to automatically prevent hazardous conditions.

Compliance is checked under the conditions of EN 437. The ignition and extinction delays shall not exceed 20 s and 60 s respectively. However, in the case of direct ignition having a flame supervision device using electrical means, these delays shall not exceed 5 s.

24.Z202 Ignition devices shall ensure safe and fast ignition.

The components of the ignition device shall be constructed to avoid damage or accidental displacement during use.

The components of the ignition device shall be constructed to avoid damage or accidental displacement during use.

The respective positions of the ignition device and the burner shall be well defined.

NOTE An ignition device is a device which ignites one or more burners directly or indirectly.

Compliance is checked by inspection.

Z201 Nominal heat input

The heat input obtained at the normal test pressure shall be equal to the nominal heat input with a tolerance of $\pm 5\%$. However, for appliances using liquefied petroleum gas having a pressure from 3 kPa to 3,7 kPa (30 mbar to 37 mbar), the tolerance is $+5\% - 10\%$.

The measurements are made under the conditions specified in EN 437, after the appliance has been operated for 10 min at its maximum gas rate, any thermostat being rendered inoperative.