



# SLOVENSKI STANDARD SIST EN 437:1997/A2:2001

01-februar-2001

---

## Preskusni plini - Preskusni tlaki - Kategorije aparatov

Test gases - Test pressures - Appliance categories

Prüfgase - Prüfdrücke - Gerätekategorien

Gaz d'essais - Pressions d'essais - Catégories d'appareils

Ta slovenski standard je istoveten z: EN 437:1993/A2:1999

[SIST EN 437:1997/A2:2001](https://standards.iteh.ai/catalog/standards/sist/4718c43a-c8b8-4e7b-b0d7-ccebc6712cce/sist-en-437-1997-a2-2001)

<https://standards.iteh.ai/catalog/standards/sist/4718c43a-c8b8-4e7b-b0d7-ccebc6712cce/sist-en-437-1997-a2-2001>

### **ICS:**

27.060.20	Plinski gorilniki	Gas fuel burners
91.140.40	Sistemi za oskrbo s plinom	Gas supply systems

**SIST EN 437:1997/A2:2001** en

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN 437:1997/A2:2001](https://standards.iteh.ai/catalog/standards/sist/4718c43a-c8b8-4e7b-b0d7-ccebc6712cce/sist-en-437-1997-a2-2001)

<https://standards.iteh.ai/catalog/standards/sist/4718c43a-c8b8-4e7b-b0d7-ccebc6712cce/sist-en-437-1997-a2-2001>

EUROPEAN STANDARD

EN 437:1993/A2

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 1999

ICS 27.060.20; 91.140.40

English version

## Test gases - Test pressures - Appliance categories

Gaz d'essais - Pressions d'essais - Catégories d'appareils

Prüfgase - Prüfdrücke - Gerätekategorien

This amendment A2 modifies the European Standard EN 437:1993; it was approved by CEN on 3 September 1999.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant 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 CEN member.

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

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

iteh STANDARD PREVIEW  
(standards.iteh.ai)

SIST EN 437:1997/A2:2001

<https://standards.iteh.ai/catalog/standards/sist/4718c43a-c8b8-4e7b-b0d7-ccebc6712cce/sist-en-437-1997-a2-2001>



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

## Foreword

This Amendment EN 437:1993/A2:1999 to EN 437:1993 has been prepared by Technical Committee CEN/TC 238 "Test gases, test pressures and categories of appliances", the secretariat of which is held by AFNOR.

This Amendment to the European Standard EN 437:1993 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2000, and conflicting national standards shall be withdrawn at the latest by April 2000.

This Amendment to the European Standard EN 437:1993 has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

## iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN 437:1997/A2:2001

<https://standards.iteh.ai/catalog/standards/sist/4718c43a-c8b8-4e7b-b0d7-ccebc6712cce/sist-en-437-1997-a2-2001>



**Table B.1.1 - Single categories marketed**

Place a cross «X» for Italy in the column I<sub>3B/P</sub>.

Add the following line between Belgium and Denmark for the Czech Republic :

Czech Republic	X				X		X	
----------------	---	--	--	--	---	--	---	--

**Table B.1.2 - Double categories marketed**

Place a cross «X» for Italy in column II<sub>2H3B/P</sub>.

Add the following line between Belgium and Denmark for the Czech Republic :

Czech Republic		X		X						
----------------	--	---	--	---	--	--	--	--	--	--

Delete the cross «X» for Spain in column II<sub>2E+3+</sub>.

Add a note <sup>3)</sup> at the cross «X» for Spain in column II<sub>2H3+</sub> :

«3) Appliances of this category set for group H gases of the second family may use air and commercial propane gas mixtures where the gross Wobbe index (at 15 °C and 1 013,25 mbar) is between 46 MJ/m<sup>3</sup> and 51,5 MJ/m<sup>3</sup>, at the same supply pressure, without additional tests».

**Table B.2 - Normal supply pressures**

Delete the question mark in the country column for Luxembourg.  
<https://standards.iteh.ai/catalog/standards/sist/4718c43a-c8b8-4e7b-b0d7-acebc6712cce/sist-en-437-1997-a2-2001>

Add the following paragraphs after the first paragraph :

“The normal pressures are identified by the reference gas or gases of the gas group”.

Place a cross «X» for Italy in the column «G 30, 30 28-30».

Add the following line and the corresponding notes between Belgium and Denmark for the Czech Republic :

Czech Republic		X <sup>3)</sup>			X	X <sup>4)</sup>	X	X	X <sup>5)</sup>			
3) Currently 18 mbar. 4) For certain types of industrial appliances 5) For certain types of appliances.												

**Table B.3 - Categories marketed nationally or locally**

Delete the line III<sub>1e2H3+</sub> and replace by :

III <sub>1e2H3+</sub>	G 150, G 20, G 30	G 21	G 152, G 222, G 32	G 23, G 31	G 30	Spain
-----------------------	----------------------	------	-----------------------	------------	------	-------

Add a line after the category I<sub>2ELL</sub> :

II <sub>1c2H</sub>	G 130, G 20	G 21	G 132, G 222	G 23	G 21	Switzerland
--------------------	-------------	------	--------------	------	------	-------------

Add three lines after III<sub>1c2H3B/P</sub> :

III <sub>1c2H3B/P</sub>	G 130, G 20, G 30	G 21	G 132, G 222, G 32	G 23, G 31	G 30	Switzerland
III <sub>1c2H3+</sub>	G 130, G 20, G 30	G 21	G 132, G 222, G 32	G 23, G 31	G 30	Switzerland
III <sub>1c2H3P</sub>	G 130, G 20, G 31	G 21	G 132, G 222, G 32	G 23, G 31	G 31, G 32	Switzerland

Add «Italy» after Denmark in the country column in line III<sub>1a2H3B/P</sub>.

### B.3.2.2.1 Appliances designed for the use of gases of the first family or which are linked to it and gases of the second family or which are linked to it

Add the following definition at the end of the paragraph :

«Category II<sub>1c2H</sub> : appliances capable of using gases of group c linked to the first family and gases of group H of the second family. The gases linked to the first family are used under the same conditions as for category I<sub>1c</sub>. The second family gases are used under the same conditions as for category I<sub>2H</sub>».

### B.3.2.3 Category III

Replace the definition of category III<sub>1c2H3+</sub> by the following one :

«Category III<sub>1c2H3+</sub> : appliances capable of using gases of group e linked to the first family, gases of group H of the second family and gases of the third family. The gases linked to the first family are used under the same conditions as for category I<sub>1e</sub>. The second family gases are used under the same conditions as for category I<sub>2H</sub>. The third family gases are used under the same conditions as for category I<sub>3+</sub>».

Add the following definitions after the definition III<sub>1a2H3B/P</sub> :

«Category III<sub>1c2H3B/P</sub> : appliances capable of using gases of group c linked to the first family, gases of group H of the second family and gases of the third family. The gases linked to the first family are used under the same conditions as for category I<sub>1c</sub>. The second family gases are used under the same conditions as for category I<sub>2H</sub>. The third family gases are used under the same conditions as for category I<sub>3B/P</sub>».

Category III<sub>1c2H3+</sub> : appliances capable of using gases of group c linked to the first family, gases of group H of the second family and gases of the third family. The gases linked to the first family are used under the same conditions as for category I<sub>1c</sub>. The second family gases are used under the same conditions as for category I<sub>2H</sub>. The third family gases are used under the same conditions as for category I<sub>3+</sub>.

Category III<sub>1c2H3P</sub> : appliances capable of using gases of group c linked to the first family, gases of group H of the second family and gases of group P of the third family. The gases linked to the first family are used under the same conditions as for category I<sub>1c</sub>. The second family gases are used under the same conditions as for category I<sub>2H</sub>. The third family gases are used under the same conditions as for category I<sub>3P</sub>».

## B.5 Special conditions

Add at the end of the paragraph :

«Italy :

appliances of categories I<sub>3B/P</sub>, II<sub>2H3B/P</sub> and III<sub>1a2H3B/P</sub> without pressure regulators marketed in Italy shall have successfully undergone a test for flame stability with the limit gas G 31 at the pressure of 45 mbar».

Add an annex D as follows :

## Annex D (informative)

### National situation of countries whose national bodies are CEN associate members

#### D.1 Categories listed in the body of the standard and marketed in the different countries

Tables D.1.1 and D.1.2 present the national situations concerning the marketing, in the different countries, of the appliance categories listed in the body of the standard.

The information given in these tables does not signify that these categories may be sold on the whole territory of the country in question and D.3 shall be consulted for verification.

In all cases where doubt subsists, the local gas distributor shall be consulted in order to specify the applicable categories.

Table D.1.1 - Single categories marketed

Country	I <sub>2H</sub>	I <sub>2L</sub>	I <sub>2E</sub>	I <sub>2E+</sub>	I <sub>3B/P</sub>	I <sub>3+</sub>	I <sub>3P</sub>	I <sub>3B</sub>
Hungary	X				X		X	X

Table D.1.2 - Double categories marketed

Country	II <sub>1a2H</sub>	II <sub>2H3B/P</sub>	II <sub>2H3+</sub>	II <sub>2H3P</sub>	II <sub>2H3B</sub>	II <sub>2L3B/P</sub>	II <sub>2L3P</sub>	II <sub>2E3B/P</sub>	II <sub>2E+3+</sub>	II <sub>2E+3P</sub>
Hungary		X		X	X					

#### D.2 Supply pressures of the appliances

Table D.2 indicates the situations of the different countries concerning the normal supply pressures of the appliances belonging to the categories given in D.1.

Table D.2 - Normal supply pressures

Gas	G 110	G 20	G 25		G 20 + G 25	G 30		G 31			G 30 + G 31	
pressures mbar	8	20	20	25	Pair 20/25	28-30	50	30	37	50	Pair 28-30/37	Pair 50/67
Country												
Hungary		<sup>1)</sup>				X	X	X		X		

<sup>1)</sup> Pressures of 25 mbar and 85 mbar.

#### D.3 Special categories marketed nationally or locally

##### D.3.1 Special categories

The national or local gas distribution conditions (gas composition and supply pressures) lead to the definition of special categories, marketed nationally or locally in certain countries, and presented in Table D.3.

Table D.3 - Categories marketed nationally or locally

Category	Reference gas	Incomplete combustion limit gas	Light back limit gas	Lift limit gas	Sooting limit gas	Country
I <sub>2S</sub>	G 25.1	G 26.1		G 27.1	G 26.1	Hungary
I <sub>2HS</sub>	G 20, G 25.1	G 21, G 26.1	G 222	G 23, G 27.1	G 21, G 26.1	Hungary
II <sub>2S3B/P</sub>	G 25.1, G 30	G 26.1, G 30	G 32	G 27.1, G 31	G 26.1, G 30	Hungary
II <sub>2S3P</sub>	G 25.1, G 31	G 26.1, G 30	G 32	G 27.1, G 31	G 26.1, G 31, G 32	Hungary
II <sub>2S3B</sub>	G 25.1, G 30	G 26.1, G 30	G 32	G 27.1, G 31	G 26.1, G 30	Hungary
II <sub>2HS3B/P</sub>	G 20, G 25.1, G 30	G 21, G 26.1, G 30	G 222, G 32	G 23, G 27.1, G 31	G 21, G 26.1, G 30	Hungary
II <sub>2HS3P</sub>	G 20, G 25.1, G 31	G 21, G 26.1, G 30	G 222, G 32	G 23, G 27.1, G 31	G 21, G 26.1, G 31, G 32	Hungary
II <sub>2HS3B</sub>	G 20, G 25.1, G 30	G 21, G 26.1, G 30	G 222, G 32	G 23, G 27.1, G 31	G 21, G 26.1, G 30	Hungary

**D.3.2** The categories of table D.3 are defined in the same manner as for the categories listed in 6.1. The characteristics of the regionally distributed gases will be found in table D.4.

### D.3.2.1 Category I

**iTeh STANDARD PREVIEW**  
(standards.iteh.ai)

*Appliances designed for the use of gases of the second family or of gases which are linked to it.*

Category I<sub>2S</sub> : appliances using only gases of group S linked to the second family, at the defined supply pressure.

Category I<sub>2HS</sub> : appliances capable of using gases of group H of the second family and gases of group S linked to the second family. The group H second family gases are used under the same conditions as for category I<sub>2H</sub>. The group S second family gases are used under the same conditions as for category I<sub>2S</sub>.

### D.3.2.2 Category II

*Appliances designed for the use of gases of the second family or which are linked to it and of gases of the third family.*

Category II<sub>2H3B</sub> : appliances capable of using gases of group H linked to the second family and gases of group P of the third family. Gases which are linked to the second family are used under the same conditions as for category I<sub>2H</sub>. The third family gases are used under the same conditions as for category I<sub>3B</sub>.

Category II<sub>2S3B/P</sub> : appliances capable of using gases of group S linked to the second family and gases of the third family. Gases which are linked to the second family are used under the same conditions as for category I<sub>2S</sub>. The third family gases are used under the same conditions as for category I<sub>3B/P</sub>.

Category II<sub>2S3P</sub> : appliances capable of using gases of group S linked to the second family and gases of group P of the third family. Gases which are linked to the second family are used under the same conditions as for category I<sub>2S</sub>. The third family gases are used under the same conditions as for category I<sub>3P</sub>.

Category II<sub>2S3B</sub> : appliances capable of using gases of group S linked to the second family and gases of group P of the third family. Gases which are linked to the second family are used under the same conditions as for category I<sub>2S</sub>. The third family gases are used under the same conditions as for category I<sub>3B</sub>.



Category II<sub>2HS3B/P</sub> : appliances capable of using gases of group H of the second family, gases of group S linked to the second family and gases of the third family. Gases of the second family or gases which are linked to it are used under the same conditions as for category I<sub>2HS</sub>. The third family gases are used under the same conditions as for category I<sub>3B/P</sub>.

Category II<sub>2HS3P</sub> : appliances capable of using gases of group H of the second family, gases of group S linked to the second family and gases of group P of the third family. Gases of the second family or gases which are linked to it are used under the same conditions as for category I<sub>2HS</sub>. The third family gases are used under the same conditions as for category I<sub>3P</sub>.

Category II<sub>2HS3B</sub> : appliances capable of using gases of group H of the second family, gases of group S linked to the second family and gases of group B of the third family. Gases of the second family or gases which are linked to it are used under the same conditions as for category I<sub>2HS</sub>. The third family gases are used under the same conditions as for category I<sub>3B</sub>.

#### **D.4 Gases and test pressures corresponding to the special categories given in D.3**

The characteristics of the test gases corresponding to the nationally or locally distributed gases, as well as the corresponding test pressures are given in Table D.4.

The values of Table D.4, measured and expressed at 15 °C, result from the application of ISO 6976:1995.

## **iTeh STANDARD PREVIEW** **(standards.iteh.ai)**

[SIST EN 437:1997/A2:2001](https://standards.iteh.ai/catalog/standards/sist/4718c43a-c8b8-4e7b-b0d7-cceb6712cce/sist-en-437-1997-a2-2001)

<https://standards.iteh.ai/catalog/standards/sist/4718c43a-c8b8-4e7b-b0d7-cceb6712cce/sist-en-437-1997-a2-2001>